DOCUMENT RESUME

ED 184 613 JC 800 159

TITLE Vancouver Community College Market Research Task Force Report.
INSTITUTION Vancouver Community Coll., British Columbia.
PUB DATE Jan 79
NOTE 127p.; For related document, see JC 800 185.

EDRS PRICE MF01/PC06 Plus Postage.
DESCRIPTORS Age; College Administration; College Planning; College Role; *Community Colleges; Economic Factors; Educational Needs; Enrollment; *Enrollment Projections; Enrollment Rate; Females; *Institutional Characteristics; Labor Market; *Long Range Planning; Males; *Needs Assessment; Population Trends; *Regional Characteristics; Student Attrition; Student Characteristics; Two Year Colleges

ABSTRACT

Part of a long-range planning process for Vancouver Community College (VCC), this report describes the college's service district and its student population and provides a basis for a projection of the college's enrollment from 1981 through 1986. After introductory material identifying the role of the Market Research Task Force within VCC's planning strategy, the report discusses the history of VCC, its administrative organization, the college's mission, the role of each of its campuses in meeting the needs of its service area, and the administrative and individual need factors which determine the area's educational demand. An examination of the size and composition of the student population from 1975 through 1978 is presented and followed by a statistical analysis of the community participation rate. Economic and demographic projections for the college's service district are then presented. The report concludes with a discussion of the weaknesses in existing data sources and a list of recommendations for the college's future educational direction. Maps and data tables are provided throughout. (JP)

****
* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *
****

ED184613

VANCOUVER COMMUNITY COLLEGE
MARKET RESEARCH TASK FORCE

REPORT

U S DEPARTMENT OF HEALTH,
EDUCATION & WELFARE
NATIONAL INSTITUTE OF
EDUCATION

THIS DOCUMENT HAS BEEN REPRODUCED EXACTLY AS RECEIVED FROM THE PERSON OR ORGANIZATION ORIGINATING IT. POINTS OF VIEW OR OPINIONS STATED DO NOT NECESSARILY REPRESENT OFFICIAL NATIONAL INSTITUTE OF EDUCATION POSITION OR POLICY

"PERMISSION TO REPRODUCE THIS MATERIAL HAS BEEN GRANTED BY

Ross Carter

TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)."

JC 800 159

JANUARY, 1979

Vancouver Community College, Langara. 100 West 49th Avenue
Vancouver, B.C. V5Y 2Z6 Telephone: (604) 324-5511

January, 1978

Mr. A.S. Manera
College Principal
Vancouver Community College
675 West Hastings Street
Vancouver, B.C.
V6B 1N2

Dear Mr. Manera,

Re: Market Research Task Force, Report
Market Research Task Force, Technical Report

On behalf of my Task Force colleagues, our Planning Consultant, those who assumed responsibility for typing and graphics, and those many of the College who contributed time, energy, and special talent ... herewith!

Yours truly,

J.J. Denholm
Chairman
Market Research Task Force
V.C.C.

JJD/SB.

VANCOUVER COMMUNITY COLLEGE

MARKET RESEARCH TASK FORCE

REPORT

JANUARY 1979

Planning Consultant:
Lyndagale Thorn.

VANCOUVER COMMUNITY COLLEGE

MARKET RESEARCH TASK FORCE

Cam Avery, Regional Office
Peter Ballin, King Edward Campus
Larry Bartlett, Student Representative,
Vancouver Vocational Institute
J. Doug Brown, King Edward Campus
Jock Denholm, Langara (Chairman)
Lawrence Fast, Continuing Education
Bob Francis, Langara
Jim Goard, Regional Office
Dalton Kremer, Vancouver Vocational Institute
Marvin Lamoureux, Vancouver Vocational Institute
Jim Mitchell, Vancouver Vocational Institute
Barry Sleigh, College Board
Glen Witter, Langara

Olive Coventry (Recording Secretary)
Joan Little (Records)
Shirley Balmforth (Secretary)

Graphics: Audio/Visual Services, Vancouver
Community College
Printing: Vancouver Community College, Langara

Planning Consultant: Lyndagale Thorn

MARKET RESEARCH TASK FORCE
REPORT & TECHNICAL REPORT

TABLE OF CONTENTS
REPORT

		Page
A.	INTRODUCTION	
	1. Planning Strategy	1
	2. Mandate of the Market Research Task Force	2
	3. Function of the Market Research Task Force	2
	4. Format of the Market Research Task Force	3
B.	PROFILE OF VANCOUVER COMMUNITY COLLEGE	
	1. Past and Present	4
	2. Organization Chart	8
	3. Mission	9
	4. Program Matrix	10
	5. Spatial Impact	10
	6. Demand	11
C.	PROFILE OF THE VANCOUVER COMMUNITY COLLEGE STUDENT	
	1. Size and Composition of the Student Population	24
	2. Vancouver Community College Participation Rates	46
D.	COMPONENTS OF CHANGE	
	1. Demographic Trends	62
	2. Economic Trends	70
E.	INTERNAL DATA SOURCES	88
F.	SUMMARY COMMENT	94
G.	RECOMMENDATIONS	98

TECHNICAL REPORT

Appendix 1:	Report Section B.4. "Program Matrix"	108
Appendix 2:	Report Section C.1. "Tables 5B, 6B, and 7B"	142
Appendix 3:	Report Section C.2. "Calculation of the 1976 and 1978 Vancouver Community College Participation Rates and Enrolment Projections to 1981 and 1986"	150
Appendix 4:	Tabulation of Survey Data	168

Page

MAPS

Map 1: Greater Vancouver Region 11

FIGURES

1. King Edward Catchment Area, 1978 14
2. Langara Catchment Area, 1978 15
3. Vancouver Vocational Institute Catchment Area 16
4. Vancouver Community College: Continuing Education Catchment Area, 1978 17
5. Vancouver Population Aged 15 to 44, 1976 (Actual), 1981 (Estimated), and 1986 (Estimated) 49
6. Greater Vancouver Region Population Aged 15 to 44, 1976 (Actual), 1981 (Estimated), and 1986 (Estimated) 50
7. Burnaby Population Aged 15 to 44, 1976 (Actual), 1981 (Estimated), and 1986 (Estimated) 51
8. North Shore Population Aged 15 to 44, 1976 (Actual) 1981 (Estimated), and 1986 (Estimated) 52
9. Richmond Population Aged 15 to 44, 1976 (Actual), 1981 (Estimated), and 1986 (Estimated) 53

TABLES

1. V.C.C.: Students' Places of Residence, Fall 1978, by Campus Centre 13
2. V.C.C.: Students' Preferred Work Location after Completion of Education 19

3A & 3B. V.C.C.: Registrants (Headcount) in all Programs by Full/Part-time Status 27-28

4. V.C.C.: Registrants (Headcount) by Program by Full/Part-time Status 32

5A. V.C.C.: Registrants (Headcount) by Program by Age.. 39

6A. V.C.C.: Registrants (Headcount) by Program by Sex.. 42

7A. V.C.C.: Academic Attrition between 1st and 2nd Year Registrants 45

8. V.C.C.: Participation Rates, 1976 and 1978, and Enrolment Projections to 1981 and 1986 57

9. Births to Residents of Vancouver and the University Endowment Lands, 1960 to 1975 64

10. Population Change by Age Group for Vancouver excluding the University Endowment Lands, 1961 to 1976 66

Page

TABLES (Cont.)

11. Employment by Industry for British Columbia/ Yukon and the Greater Vancouver Region, 1971 71

12. Employment Forecast by Industry for British Columbia/Yukon, 1971 to 1982 74

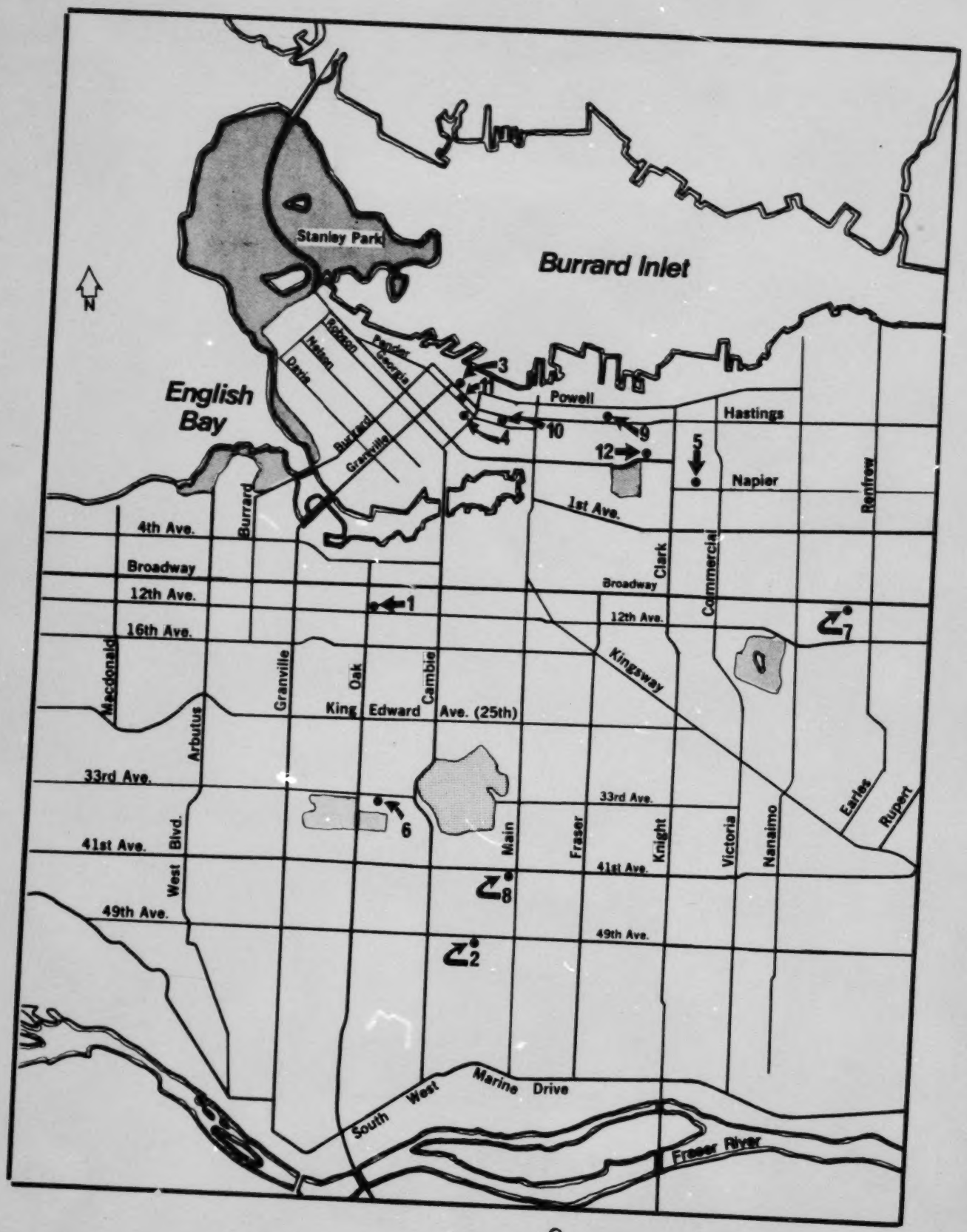
13. Labour Market Indicators for British Columbia, 1966 to 1977 75

14. Occupations in Demand in British Columbia/ Yukon, February, 1978 77

15. Labour Force Employment in the Greater Vancouver Region, 1971 to 1986 85

16. Occupations in Demand in the Metropolitan Vancouver Area, February, 1978 87

17. V.C.C.: Registrants (Headcourt) by Program for October, 1975-77 92


Stanley Park
Burrard Inlet
N
English Bay
Robson
Haro
Davie
Barclay
Georgia
Burrard
Granville
Powell
Hastings
Napier
Renfrew
1st Ave.
4th Ave.
Broadway
12th Ave.
16th Ave.
Clark
Commercial
Kingsway
Macdonald
Arbutus
Granville
Oak
Cambie
King Edward Ave. (25th)
33rd Ave.
41st Ave.
49th Ave.
West Blvd.
Main
Fraser
Knight
Victoria
Nanaimo
Earles
Rupert
South West Marine Drive
Fraser River
1
2
3
4
5
6
7
8
9
10
12

Vancouver Community College
centres indicated on this map

1 King Edward Campus, 2750 Oak St. (at 12th Ave.)
2 Langara, 100 West 49th Ave.
3 Regional Office, 675 W. Hastings St.
4 Vancouver Vocational Institute, 250 West Pender St.
5 Brittania Centre, 1661 Napier St.
6 Eric Hamber Secondary School, 5025 Willow St.
7 Vancouver Technical Secondary School, 2600 East Broadway
8 John Oliver Secondary School, 530 E. 41st Ave.
9 Strathcona, 590 E. Pender St.
10 Lotus Gardens, 455 Abbott St.
11 VVI Power Sewing, 555 Homer St.
12 VVI Building Construction, 630 Raymur St.

VCC also operates programs at different branches of the Public Library and at Community Centres throughout the city.

A. INTRODUCTION

1. Planning Strategy

In June 1978 the Principal, Vancouver Community College, initiated A Planning Process for Vancouver Community College. A document so titled was circulated among College campuses and constituencies. Therein the College Principal outlined a two-phase planning strategy designed to lead ultimately to the establishment of goals and objectives for Vancouver Community College.

The ultimate objective of the planning process could not be attained without information; information appropriate to the establishment of the College's goals and objectives. The first phase, therefore, involved collecting and synthesizing information related to the work of the College. Three "task forces" were established to this end ... Institutional Research, Evaluation and Market Research ... each charged with a segment of the collecting and synthesizing task. In the second phase of the planning strategy (to begin in 1979), the information provided by the first phase task forces will be analyzed and will form the basis for the development of College goals and objectives for the ensuing five year period.

Concurrently (and from a somewhat earlier beginning), a combination of external forces were and are moving the B.C. Post-Secondary system in a not dissimilar direction. The Colleges and Provincial Institutes Act, 1977[1], has made mandatory the setting of explicit goals and objectives and the development of ongoing planning and evaluative processes. Fiscally, the development of a forward-planning capability is now required and, for the future, is a foregone conclusion. Educationally, forward-planning is overdue. The timing of A Planning Process for Vancouver Community College is thus singularly appropriate.

---

1. Passed Third Reading, Sept. 14, 1977. Proclaimed in substance prior to Dec. 1, 1978.

2. Mandate of the Market Research Task Force

It is the mandate of the Market Research Task Force "... to describe the population whose educational and training needs can best be met by Vancouver Community College in the future ...."[2] To the satisfaction of the Task Force mandate, the College placed at its disposal the human and material resources of Vancouver Community College; directly from the membership of the Task Force, which is representative of the campuses and constituencies of the College, and indirectly through the Task Force members to the campuses and constituencies themselves.

3. The Function of the Market Research Task Force

The Market Research Task Force has derived the following functions which are considered appropriate to fulfill its mandate:

a) To determine the predominant trends in the composition and size of the student population Vancouver Community College has served and is serving presently.

b) To describe and account for these trends in light of institutional policy, including the financial and physical resources which have been, and are now, available to Vancouver Community College.

c) To determine the predominant trends in the population at large and the likely changes in its size and composition.

d) To identify potential post-secondary student enrolment to 1981 and 1986.

e) To establish wherein student demand will best be met by Vancouver Community College in the next five year period.

[Note: (a) + (c) + (d) - (b) = (e)]

---

2. Manera, A.S., A Planning Process for Vancouver Community College, May 29, 1978, p.2.

Corollary

To determine what internal and external data are required to facilitate forward-planning for Vancouver Community College, 1979 onward.

Corollary

To heighten awareness of the educational planning process *per se* and its significance for all associated with the College and the College community.

4. Format of the Market Research Task Force Report

The time frame of this first phase of the Market Research Task Force's work was set by the College Principal for a five year period. The specific period spanned by this Report is to 1981 and 1986 in order to conform to data made available to the Task Force from other agencies. The Report commences descriptively with the past, the present, and the known, profiling first the College and to some extent the community it serves, then the students of the College. That which follows is the more difficult and less concrete; an identification of those trends which may help to indicate the nature of the future student population of Vancouver Community College and a projection of the College's enrolment to 1981 and 1986.

Finally, and from the foregoing, the Report discusses the inadequacy of existing data which hinders effective, ongoing forward-planning at Vancouver Community College, and recommends respecting the College's future educational direction(s).

B. PROFILE OF VANCOUVER COMMUNITY COLLEGE

1. Past and Present

Prior to 1965, there were four separate public Adult Education institutions in Vancouver, each functioning independently of the others, satisfying different areas of community need, and all operated by the Vancouver School Board. These institutions were the Adult "Night School" Program (begun in 1909), the Vancouver Vocational Institute (founded in 1945), the Vancouver School of Art (founded in 1929), and the King Edward Senior Matriculation & Continuing Education Centre (established in 1962). By 1965, the concept of the "Community College" had taken root and the separate, yet complementary, institutions were combined as "Vancouver Community College".

The new and combined College, still operating under the Vancouver School Board, was named "Vancouver City College". Initially, the King Edward Campus grew most rapidly. In the fifth year of the College's operation a new campus was completed at Langara and opened in October, 1970. King Edward, however, was not abandoned. A fifth centre of the College was there established, first named the "Special Programs Division", but it has since reverted to the name "King Edward".

In late 1970 responsibility for the College was shifted from the Vancouver School Board to a new body, the Vancouver Community College Council. That Council was comprised of six members, two appointed by the Vancouver School Board, and four by the Lieutenant-Governor in Council. Until late 1978 the College was thus a quasi-but-not-quite independent institution, operating under the Public Schools Act. Under the recently proclaimed Colleges and Provincial Institutes Act, the College Board is now comprised of five members. Designation has recently established the College as a legal entity under that Act. The full ramifications of designation and of the new Act are not yet clear.

Today the four[3] principal centres of Vancouver Community College are:

a) King Edward Campus

King Edward Campus was created in 1970 to consolidate a variety of programs which had been located previously at different locations. As well as administering on-site programs, King Edward is responsible for classes at more than thirty centres throughout Vancouver.

A new campus location on West 8th Avenue will soon be added and a new Campus site is being considered. Today, however, King Edward operates at many sites owing, in part, to the shortage of space at 12th Avenue and Oak Street, but in large measure to provide instruction close to the student's place of residence.

A unique variety and range of programs are provided by King Edward for a unique clientele. King Edward caters to adults of all ages, ethnic, and educational backgrounds. Primarily, adults requiring preparatory courses (courses leading to other training or upgrading basic skills to enter or re-enter the work force) and English Language Training are accommodated.

King Edward consists of three instructional divisions: College Foundations, Communication Arts and Training and Development. At present, more than 5,000 full-time and part-time students are enrolled in classes, which are held Monday to Friday between 08:00 and 22:00 hours.

---

3. Since 1977, the Vancouver School of Art has operated apart from Vancouver Community College.

b) Langara

Langara is one of the most intensively used educational facilities in British Columbia. On a normal week day 6,500 full-time, part-time and Continuing Education students from throughout the Greater Vancouver Region use the campus.

Located at 100 West 49th Avenue, Langara held its first classes during October of 1970. Langara offers a broad post-secondary curriculum throughout a fourteen hour instructional day. During the fall and spring term it enrols regularly 5,000 students; 4,000 in Arts and Science programs (first and second year University transfer students) and over 1,000 in twenty-three career programs of specific occupational orientation. Several programs (Arts and Science in particular) are open to both full and part-time attendance, affording students the opportunity to enrol upon a basis most suitable to their needs. The academic year is divided into three terms of four months each, which enables students to enrol in Arts and Science programs and some career programs year-round.

c) Vancouver Vocational Institute

The Vancouver Vocational Institute was conceived and constructed in the late 1940s in response to a growing awareness of the need for realistic technical and vocational training. Now ... as then ... it specialized in the initial training and upgrading of students who wish to pursue or are pursuing careers in business, industrial, and service sectors. At any one time the Vancouver Vocational Institute enrols 2,000 plus full-time and 500 plus part-time students in programs ranging from short, highly specialized training for the already employed, to full-time programs of two years' duration. To accommodate its many and varied programs, the

Vancouver Vocational Institute operates day and evening and, occasionally in a few programs ... around the clock.

d) Continuing Education

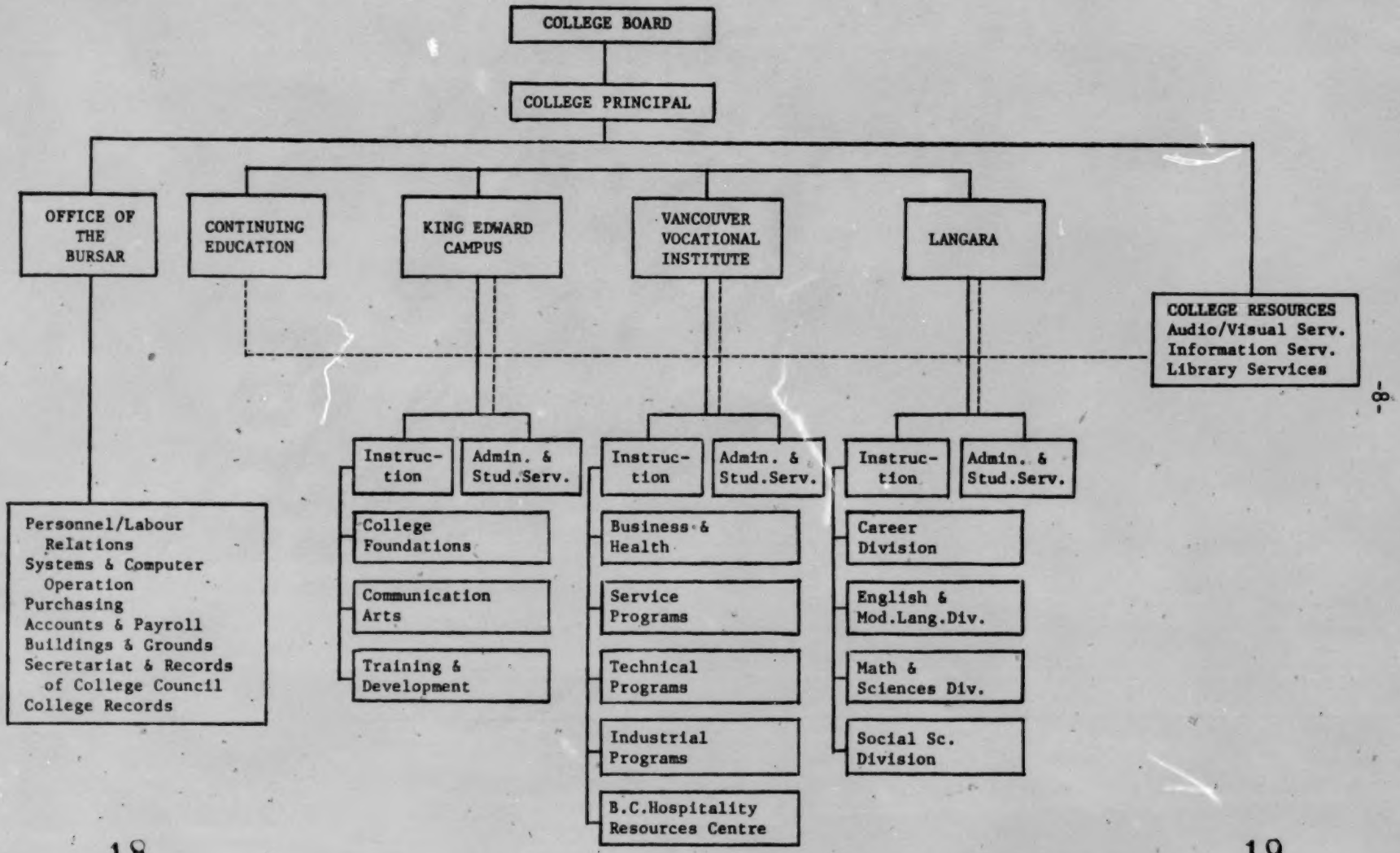
Continuing Education is the arm of the College which offers the public the broadest variety of learning experiences. The Continuing Education program includes over 300 short-term courses for part-time students. It features several major instructional areas: a Business Administration Upgrading program, Vocational and Technical courses, as well as General Interest courses.

Continuing Education annually registers approximately 20,000 part-time students. Courses are held at three evening centres: Langara, Vancouver Vocational Institute and Eric Hamber Centre. Langara is foremost for College offerings of General Interest courses. In addition, courses for all kinds of short-term instruction are operated throughout Vancouver.

The fall program of Continuing Education begins in early September, the winter term in early January, the spring term in early April, and the summer term in mid-June.

2. ORGANIZATION CHART

VANCOUVER COMMUNITY COLLEGE



3. Mission

Phase II of the Planning Process will result in the establishment of Vancouver Community College Goals and Objectives. It can be argued, therefore, that a statement of "mission" during Phase I of the planning process is presumptuous. Nevertheless, the College does have an extant statement of mission written in late 1977 in response to a request from the Ministry of Education. It was endorsed by College Council on January 25, 1978. It represents a distillation of: briefs by College constituencies presented over a protracted period, a "Scope, Objectives and Planning" document proposed by College Council in late 1976, and a proposed statement of goals from the Ministry of Education in late 1977. It must be noted that the statement endorsed by College Council, which follows, was regarded both in generation and in passage, as more interim than final. It is reproduced as a background statement in explanation of the extant College position.

STATEMENT OF MISSION

VANCOUVER COMMUNITY COLLEGE

> Vancouver Community College is a public educational institution committed to the development and to the offering of organized learning opportunities appropriate to the learning needs of adults, institutions and organizations in the Vancouver Community College region.

4. Program Matrix

The Task Force undertook to produce a comprehensive, College-wide listing/inventory/matrix of offerings. The undertaking proved to be simpler in conception than in accomplishment. Bob Francis, who undertook the task, was called upon to exhibit a higher tolerance level for hard work and for frustration than the Task Force had a right to expect.

An educational plan cannot be simply a listing of broad families of programs, now and projected, and their enrolment. An early stage in planning, however, is the generation of such a listing, followed by the generation of a much more explicit listing of programs, their duration, their capacity, their enrolment, their completion count, etc.. Then, and only then, is it possible to consider explicitly, at the unique program level, the impact of variables (facilities, finances, policy, etc.). The attempt to accomplish the explicit listing exercise revealed most strikingly the inconsistency of definition, the incompatibility of data, the diversity of the College's offering.

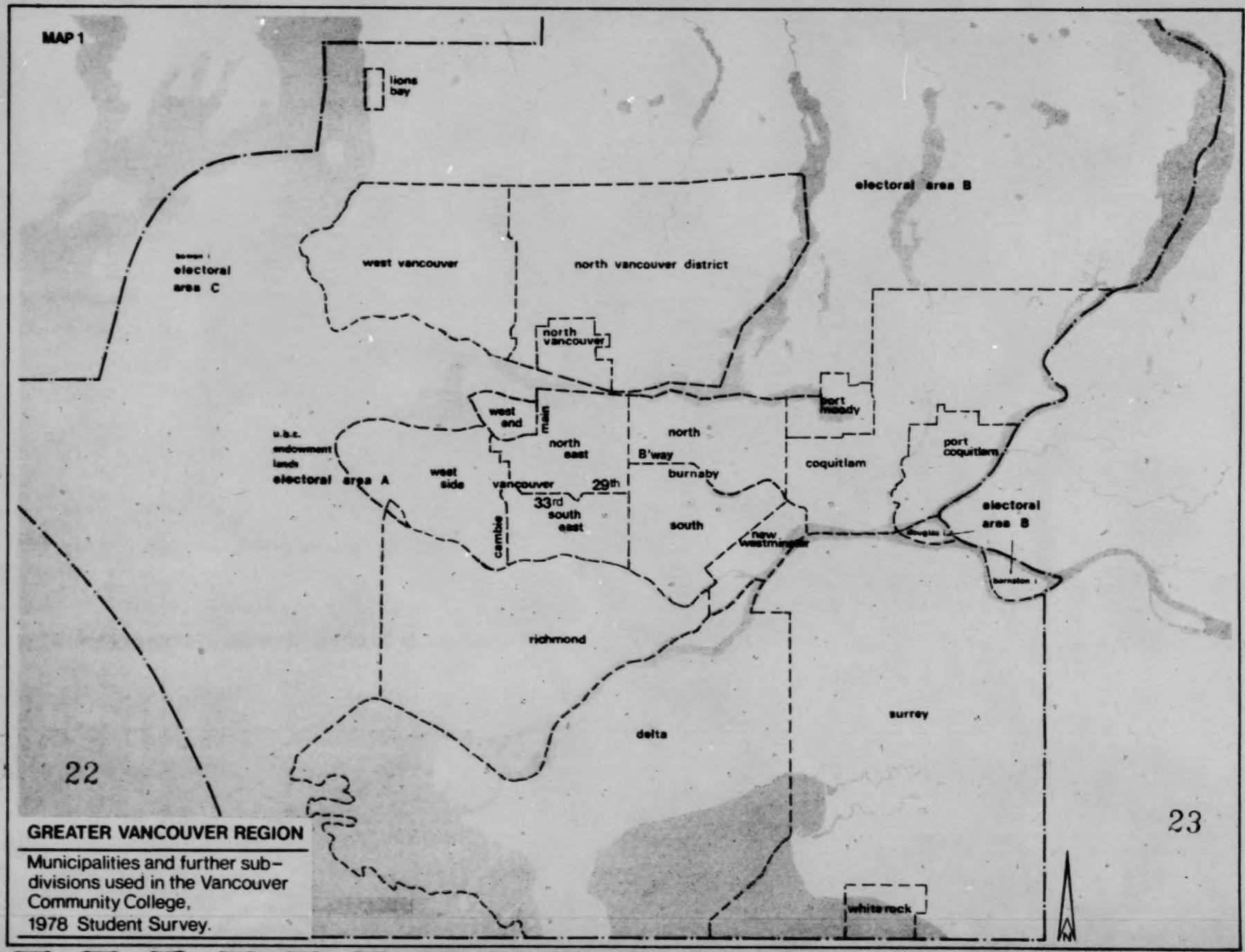
The matrix produced ... the program offerings of Vancouver Community College ... appears as: Technical Report, Appendix I. It includes commentary upon the problems of program matrix development, and recommendations: a suggested sequence for the future preparation of program matrices.

5. Spatial Impact

Vancouver Community College serves predominantly the City of Vancouver. More than 76% of the College's students live within the City boundaries. The remaining 24% of Vancouver Community College students live throughout the Greater Vancouver Region.[4] The attraction of Vancouver Community College tends to decrease with distance east from Vancouver, since approximately 90% of students registered in the fall term, 1978, lived in the four Municipalities of Vancouver, Burnaby, New Westminster and Richmond.

---

4. The addresses of Vancouver Community College students are collected at registration. This data has been analyzed for all Langara students from 1976 to 1978, however, a residency requirement was in place prior to the fall term, 1978, which brings into question the reliability of this data. Small samples of students' addresses have been analyzed for King Edward Campus for October, 1977, and for Vancouver Vocational Institute for May, 1977. No Continuing Education analysis is available. A high response rate of 63.83% was obtained in the Student Survey, 1978, which enables the Vancouver Community College catchment area to be drawn on the basis of this data, as discussed here.



GREATER VANCOUVER REGION

Municipalities and further sub-divisions used in the Vancouver Community College, 1978 Student Survey.

It is of note that 10% of Vancouver Community College's 1978 student enrolment moved to their present addresses in order to attend the College.[5] Of the students who moved, over 81% moved to locations within the City of Vancouver. Thus, although the Vancouver Community College catchment area is dominated by Vancouver, student origins are not necessarily in the City. Hence, the College catchment area can be considered to be slightly more diverse than is suggested by Table 1. The City of Vancouver is Vancouver Community College's primary catchment area, while the remainder of the Greater Vancouver Region acts as the College's secondary catchment area.[6] Map 1 illustrates the boundaries of the Greater Vancouver Region.

In general, students living in the four areas within Vancouver (West End, Westside, South-east and North-east) do not tend to select one particular Vancouver Community College campus over another. No strong catchment pattern within the City was discernible from the data recorded in Table 1. The marked variations noted are the high proportion of King Edward students who live in North-east Vancouver, the stronger attraction for Westside students to Langara and Continuing Education, as opposed to other Vancouver Community College campuses, and the high proportion of Vancouver Community College students resident outside of the City of Vancouver.

As illustrated by Figures 1 to 4, each of the three campuses and Continuing Education show a rather different regional catchment area when considered independently.[7]

---

5. Student Survey, 1978, (Question 23).

6. The "catchment area" may be defined as that area in which the students enrolled at Vancouver Community College live.

7. See: Technical Report Appendix 4, Table 1, for the actual College catchment area data.

TABLE 1. VANCOUVER COMMUNITY COLLEGE: STUDENTS' PLACE OF RESIDENCE, FALL 1978, BY CAMPUS CENTRE

(% is a proportion of students' residence locations by Campus and by V.C.C. as a whole)

RESIDENCE LOCATIONS	V.C.C. Total		King Edward		V.V.I.		Langara		Cont. Ed.	
	Actual	%	Actual	%	Actual	%	Actual	%	Actual	%
Vancouver										
West End	747	6.59	245	8.22	116	8.32	149	3.94	237	7.48
West Side	3,145	27.76	578	19.38	218	15.64	1,285	33.95	1,064	33.59
South East	1,849	16.32	512	17.17	172	12.34	740	19.55	425	13.42
North East	2,946	26.00	1,131	37.93	348	24.96	885	23.38	582	18.37
Total VANCOUVER	8,687	76.67	2,466	82.70	854	61.26	3,059	80.82	2,308	72.85
Burnaby										
North	372	3.28	111	3.72	66	4.73	80	2.12	115	3.63
South	424	3.75	91	3.05	61	4.38	148	3.91	124	3.91
Total BURNABY	796	7.03	202	6.77	127	9.11	228	6.03	239	7.54
New Westminster	111	.98	21	.70	37	2.65	19	.50	34	1.07
North Shore	528	4.66	86	2.88	142	10.19	120	3.17	180	5.68
Richmond	574	5.07	102	3.42	87	6.24	203	5.36	182	5.74
Surrey	263	2.32	36	1.21	68	4.88	52	1.37	107	3.38
Delta	173	1.53	27	.91	27	1.94	64	1.69	55	1.74
Remainder of Region	197	1.74	42	1.41	52	3.73	40	1.06	63	1.99
TOTAL RECORDED	11,329	100.00	2,982	100.00	1,394	100.00	3,785	100.00	3,168	100.00

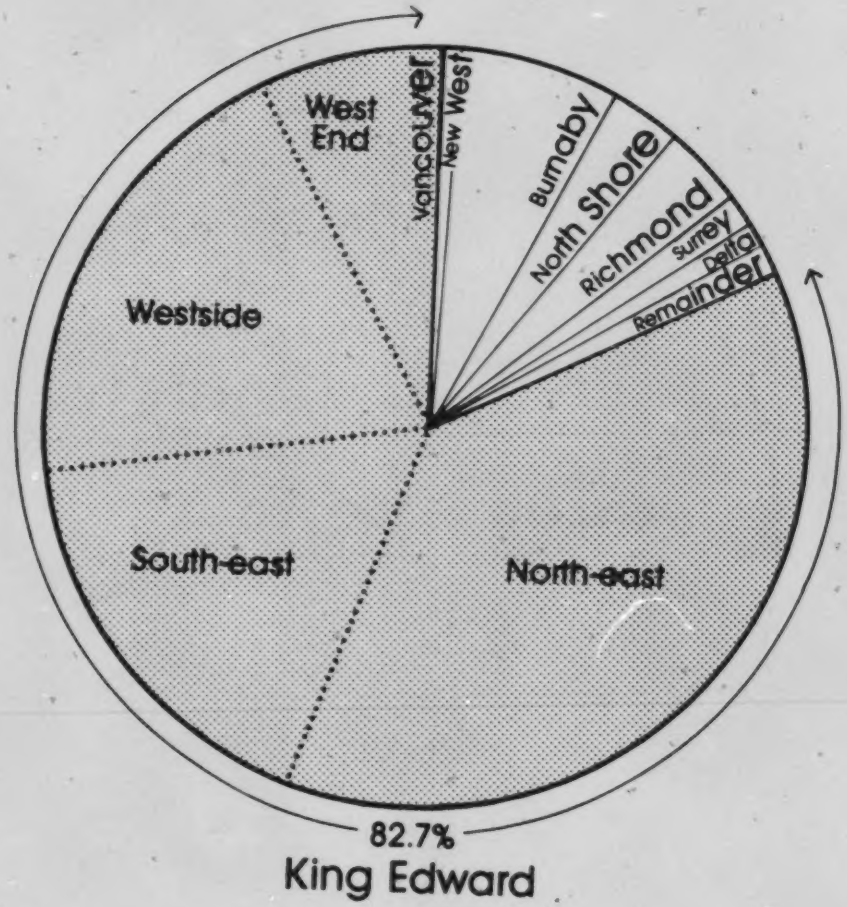
Source: Vancouver Community College Student Survey, 1978 (Question 1)

Notes:
* 'The North Shore' includes North Vancouver City & District, and West Vancouver
* 'Remainder of Region' includes Port Moody,

King Edward

Of all centres, King Edward has the most localized catchment area. Approximately 90% of its students come from Vancouver and Burnaby. Over 82% of King Edward students live in Vancouver in relatively close proximity to the campus site.

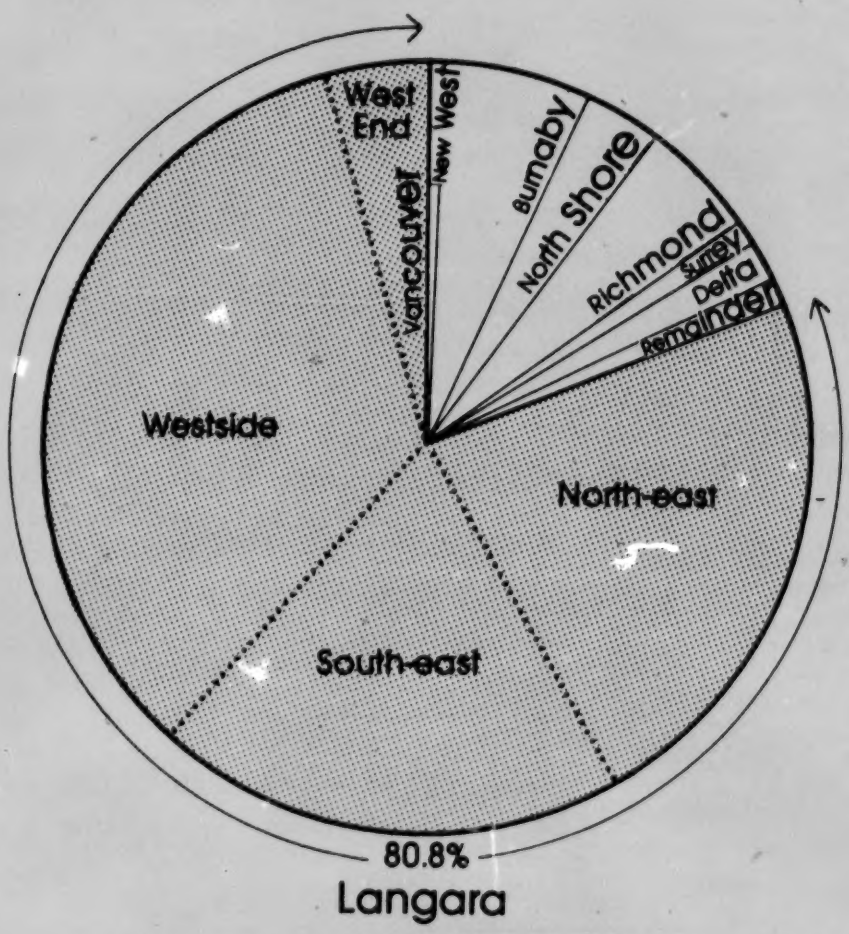
Figure 1: King Edward Catchment Area, 1978



Langara

Approximately 80% of Langara students live in Vancouver; the remaining 20% are drawn from a catchment area similar to that of the College as a whole. Within Vancouver, over 42% of Langara students live east of Cambie Street, 33% west of Cambie Street, and 4% in the West End (which is the smallest proportion of all students coming from that area to a Vancouver Community College campus).

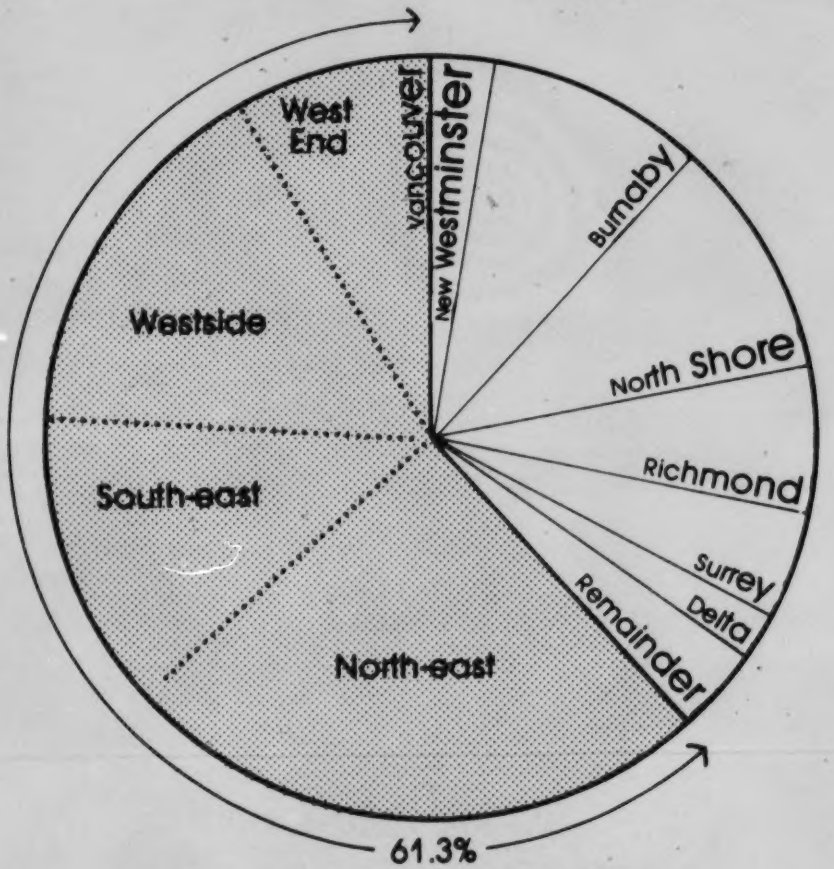
Figure 2: Langara Catchment Area, 1978



Vancouver Vocational Institute

This campus is the most "regional" of the Vancouver Community College centres, in that it draws over 38% of its students from locations outside the City of Vancouver. It attracts a markedly higher proportion of students from the North Shore than do the other centres and shows an eastward focus in the region. Over 52% of Vancouver Vocational Institute students live in East Vancouver, Burnaby, New Westminster, Port Moody, and the Coquitlams. As the Vancouver Vocational Institute is located in downtown Vancouver, it shows a slightly stronger relationship with the West End than the other campuses and Continuing Education. Even so, only 14% of Vancouver Vocational Institute's Vancouver enrolment comes from the West End.

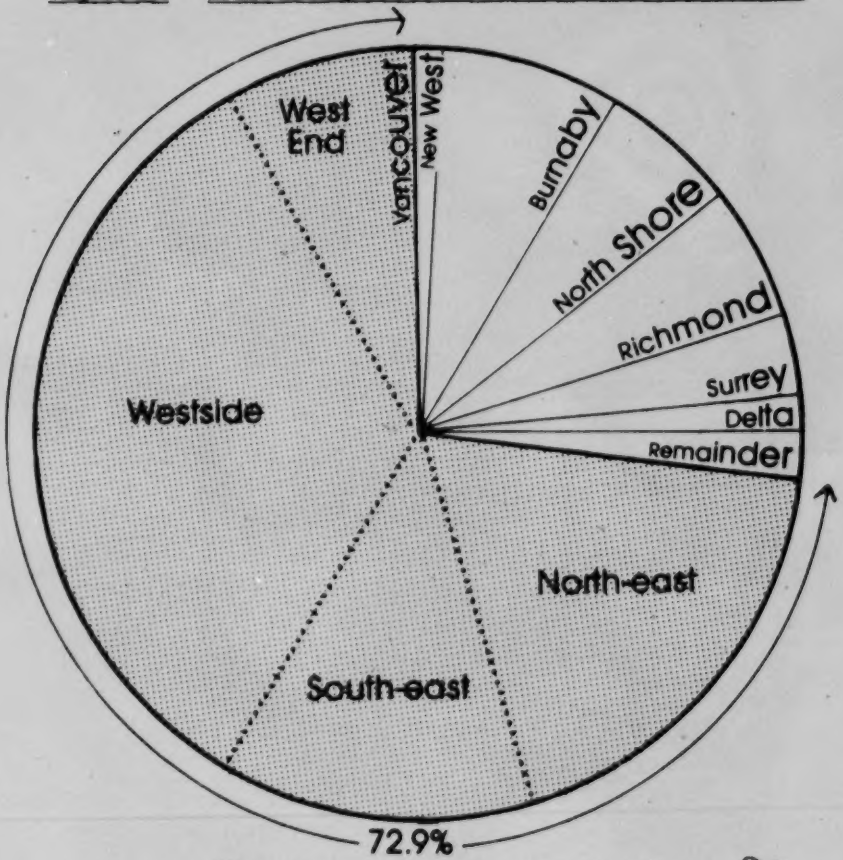
Figure 3: Vancouver Vocational Institute Catchment Area, 1978



Continuing Education

The catchment area of Continuing Education is a reflection of those of Langara and Vancouver Vocational Institute, since 58% of Continuing Education students take courses at Langara and Vancouver Vocational Institute. Another 29% take courses at Eric Hamber and 13% at other centres.[8] Approximately 73% of Continuing Education students live in Vancouver, almost equally divided east and west of Cambie Street, with a considerable number drawn from the West End, reflecting the influence of Vancouver Vocational Institute programming. As for Vancouver Community College as a whole, the remaining 27% of Continuing Education students live throughout the Greater Vancouver Region.

Figure 4: Continuing Education Catchment Area, 1978



8. Vancouver Community College Student Survey, 1978.

The service area of Vancouver Community College is a parallel concept to the catchment area; the "services area" being the location where students work once they have completed their education and enter the labour force.[9] Table 2 records student preferences for work locations.

As anticipated, in light of the Vancouver Community College catchment area, the greatest number of students expressed a preference to work in, or as close to, Vancouver as possible, once they have completed their education. However, a considerable number of Vancouver Community College students (over 24%) choose to work outside the Greater Vancouver Region. A surprisingly high proportion (12%) of the students do not appear to have any preference as to where they might find employment. This statistic is lowest for Continuing Education students as approximately 80% are already employed in full and part-time jobs. However, about 19% of Continuing Education students would still prefer to find jobs in areas where they do not now live or work.

Of those students who have decided where they would like to work, Langara and Vancouver Vocational Institute students are the most mobile groups, averaging 29% choosing locations outside the Vancouver region. Only 17% of King Edward students would not choose the area in or around Vancouver. It may be that these students have already made their principal life-time move by virtue of immigration to Canada.

Should these expressed preferences be realized, the Vancouver Community College service area would extend far beyond the Greater Vancouver Region, with College students forming a part of the labour force across Canada and abroad.

---

9. A number of reports have been prepared on an occasional basis which attempt to trace the Vancouver Community College students once they leave the College. Unfortunately, these reports are difficult to use here as they do not discuss all centres or all students and were prepared at different times. The most comprehensive and recent data is available from the Vancouver Community College Student Survey, 1978.

TABLE 2. VANCOUVER COMMUNITY COLLEGE: STUDENTS' PREFERRED WORK LOCATION AFTER COMPLETION OF EDUCATION

(% is a proportion of preferred locations by Campus and by V.C.C. as a whole)

PREFERRED LOCATIONS	V.C.C. Total		King Edward		V.V.I.		Langara		Cont. Ed.	
	Actual	%	Actual	%	Actual	%	Actual	%	Actual	%
Vancouver City	3,372	42.02	1,143	50.42	546	33.70	1,129	37.19	554	50.26
As close to Vancouver as possible	1,715	21.37	448	19.76	417	25.74	609	20.07	241	21.86
Other location in British Columbia	974	12.14	193	8.51	273	16.85	417	13.74	91	8.26
Other Canadian Province	467	5.83	106	4.68	103	6.37	210	6.92	48	4.36
Outside Canada	533	6.64	77	3.40	82	5.06	305	10.05	69	6.28
Don't Care	963	12.00	300	13.23	199	12.28	365	12.03	99	8.98
TOTAL RECORDED	8,024	100.00	2,267	100.00	1,620	100.00	3,035	100.00	1,102	100.00

Source: Vancouver Community College Student Survey, 1978 (Question 10).

Notes: * Students were asked to check more than one category if appropriate, so that total response does not relate to sample size.

6. Demand

The demand for post-secondary education is determined by decisions taken at three levels. These are:

Level 1: Policy decisions on the part of the post-secondary institution, its governing body and senior government. These decisions affect the supply and distribution of educational resources among people and places.

If we had unlimited public resources to build, serve, and staff post-secondary institutions, the demand for education and training could be perfectly satisfied. This is, of course, not the case now, nor is it likely to be the case in the foreseeable future. As a natural consequence, policy decisions must be made with respect to the allocation of limited resources in the best possible manner (i.e. a selectivity of catering to the demand for post-secondary education). A partial listing, for purposes of illustration, of those factors pertinent to distributing educational resources may include the following:

Administrative Factors

- admission standards
- student probationary period
- waiting list criteria
- residency requirements
- fee and payment schedules
- timetabling flexibility
- entry ages
- available student status
- staffing procedures
- advertising of programs

Fiscal Factors

- size of operating budget
- size of capital budget
- course funding procedures.

Other Factors

- location of institution
- English Language placement.

Level 2: Policy decisions on the part of agencies and governments whose mandate requires that an education component be included in the delivery of their services.

These decisions add a relatively constant level of demand for and funding of education from a diverse range of groups, including Canada Employment and Immigration, in-house training by business and industry, large public sector services (health and health related in particular) and the like.

Level 3: Personal decisions on the part of individuals. These decisions affect the student's preference for types of post-secondary education, institution attended, and time of enrolment.

Attendance at a post-secondary institution is not mandatory as it is, for all practical purposes, in the elementary and secondary schools. Therefore, an individual has the opportunity to make a personal decision with respect to pursuing education beyond secondary school. A number of factors will be considered by an individual in making the choice to pursue a post-secondary education. A partial listing, for purposes of illustration, of those factors may include the following:

- what other opportunities do I have now?
- what do I want to learn?
- what do I want to do afterward?
- can I afford it?
- where shall I go?

Policy decisions and personal decisions are very much inter-related and inter-dependent. In fact, not only are these two levels inter-related, they are also operating in a broader universe of variables ... no less than the patterns of demographic, economic, and social shifts in society.

Certain critical pitfalls await those who pursue the question of demand for post-secondary education. They include:

- lack of knowledge of the complexity of factors which contribute to demand
- lack of control over all the salient variables
- lack of stability of the assumptions which underlie the analysis of past trends and upon which projections of future states are based.

This Report cannot, then, be considered as prediction of the future. It is a crucial step in examining some relationships among the patterns of shifts in society and demand for post-secondary education.

One aim of this Report is to promote discussion among those responsible for policy decision-making; for it is in the realm of policy that the College has the greatest leverage in the influencing of future events. It is a Report, therefore, which must be used actively. Readers should question it, think about it, and argue with it. The information contained herein should be received and amended as the environment changes, and as policy changes.

C. PROFILE OF THE VANCOUVER COMMUNITY COLLEGE STUDENT

1. Size and Composition of the Student Population

What is a student? For the purposes of this Report the Task Force defined a student quite simply as "a person who is enrolled at Vancouver Community College". To describe a student was more difficult than to define a student.

Historic description of the size and composition of the Vancouver Community College student population cannot be undertaken without acknowledgment of the serious limitations in the data available. The limitations are sufficiently severe as to preclude detailed identification of trends in the student population enrolled at Vancouver Community College ... even over a four year time period (see: Section E). In full cognizance of these deficiencies, the Task Force compiled data on student enrolment between 1975 and 1978 from the Ministry of Education's College Statistical Report Forms (Halloween Report) and Vancouver Community College, Regional Office, files. In referring to the following Tables 3 to 7, caution is required. The explanatory notes for each table must be used in order to ascertain the particular component of Vancouver Community College enrolment illustrated.

A review of the data, recorded and synthesized in Tables 3 to 7, has resulted in the following major observations.

TABLE 3A VANCOUVER COMMUNITY COLLEGE:
REGISTRANTS (HEADCOUNT) IN ALL PROGRAMS BY FULL/PART-TIME STATUS

From 1975 to 1978, total College enrolment has fluctuated averaging 17,718 students each year. The 1978 enrolment was the highest enrolment during that period, with 18,375 students registered at Vancouver Community College.

As seen in Table 3, College enrolment is consistently made up of 30% full-time and 70% part-time students. The number of full-time students has increased steadily from 5,091 in 1975 to a peak of 5,410 in 1978, while the number of part-time students has varied, averaging 12,524 students each year, but peaking in 1978 at over 12,900 students.

TABLE 3A VANCOUVER COMMUNITY COLLEGE: REGISTRANTS (HEADCOUNT) IN ALL PROGRAMS BY FULL/PART-TIME STATUS

Source: V.C.C., Regional Office Files.

Notes:

* Withdrawals are not included for Vocational and Continuing Education programs.

* Withdrawals are included for Academic, College Foundations, English Language Training and Career/Technical programs.

* Vancouver School of Art registrants are not included.

* The definition of a full and part-time student is not consistent among College campuses:

V.V.I.:	a full-time student has 30 contact hours per week of instruction; a part-time student something less.
K.E.C.:	a full-time student enrolled in Vocational and English Language Training has 30 contact hours per week of instruction; a part-time student something less.
	In College Foundations a full-time student enrols in four or more courses; a part-time student something less.
Langara:	a full-time student enrols in four or more courses; a part-time student in something less.
C.E.:	all students are considered part-time.

TABLE 3A. VANCOUVER COMMUNITY COLLEGE: REGISTRANTS (HEADCOUNT) IN ALL PROGRAMS BY FULL/PART-TIME STATUS

October Headcount
(% is a proportion of total registrants by year)

	1975		1976		1977		1978	
ALL PROGRAMS	Actual	%	Actual	%	Actual	%	Actual	%
FULL-TIME	5,091	28.2	5,079	30.3	5,196	29.4	5,410	29.4
PART-TIME	12,977	71.8	11,705	69.7	12,449	70.6	12,965	70.6
TOTAL: ALL PROGRAMS	18,068	100.0	16,784	100.0	17,645	100.0	18,375	100.0

Table 3B

REGISTRANTS (HEAD COUNT) IN ALL PROGRAMS BY FULL/PART-TIME STATUS

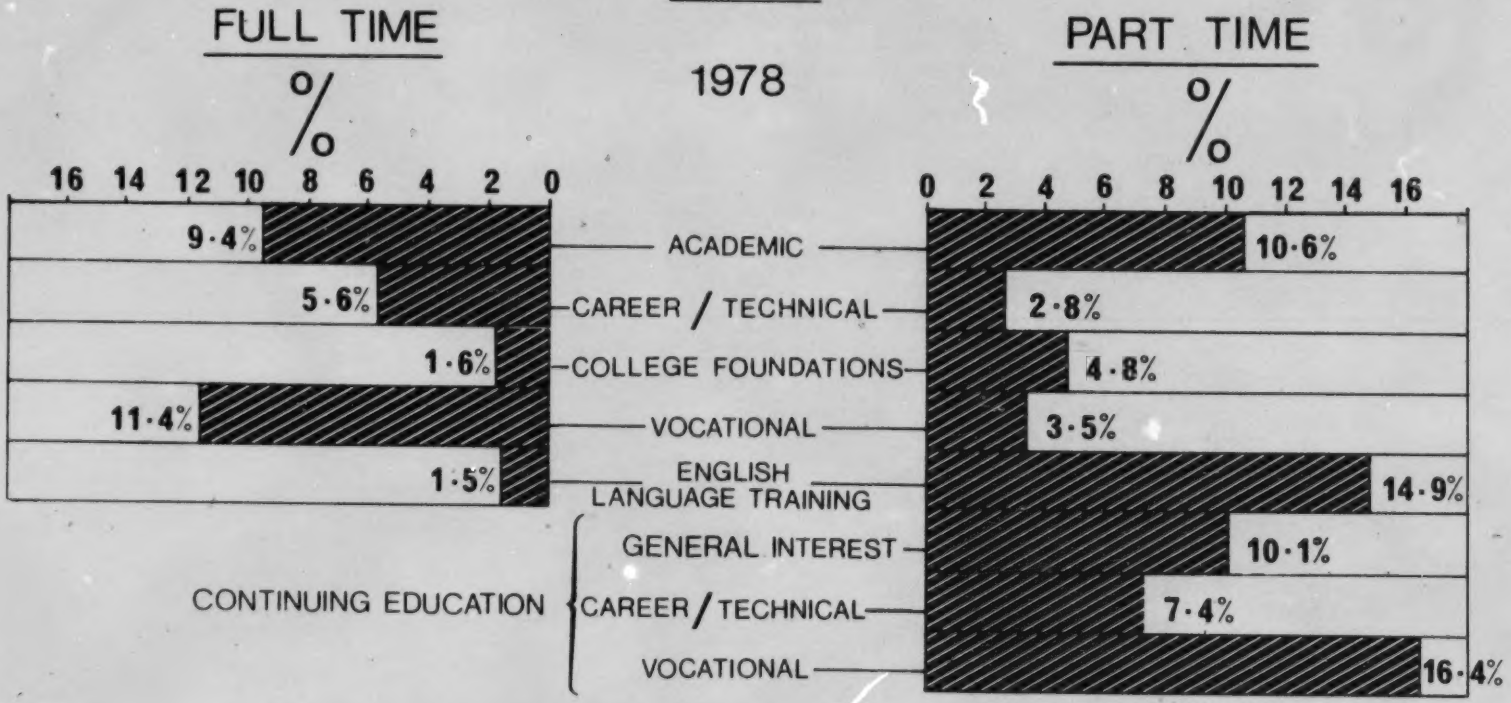


TABLE 4 VANCOUVER COMMUNITY COLLEGE: REGISTRANTS (HEADCOUNT) BY PROGRAM BY FULL/PART-TIME STATUS

This table shows variations in College enrolment by program area from 1975 to 1978. Within the individual program areas, certain enrolment trends are evident.

Academic

This program area consistentiy accounts for approximately 20%± of Vancouver Community College students from 1975 to 1978 and has the highest Vancouver Community College program enrolment. A decline in the number of full-time students over the period has been matched by an increase in part-time students to give a fairly stable total. However, these opposing trends have reversed the full-time/part-time composition from 56% full-time enrolment in 1975, to 53% part-time enrolment in 1978.

In all program areas it is difficult to postulate the reasons for the observed changes in enrolment. Both in the Academic and other program areas the reasons underlying enrolment change are so numerous that identification of the most significant reason or reasons becomes a matter of some speculation. Nevertheless, it is suggested that three factors have contributed most significantly to the full-time/part-time reversal in Academic enrolment from 1975 to 1978. These are:

- economic: many Academic students work to maintain themselves and as a consequence reduce their course load. For instance, over 52% of the students at Langara in 1978 were working. Of these students, 32% were working in full-time jobs of over 30 hours per week and 68% were working in part-time jobs.[10]

10. Student Survey, 1978 (Question 36).

- attitudinal: Academic students are taking a lighter course load and a longer time to achieve their career goals. Other personal commitments may prohibit full-time enrolment as, for example, 11% of Langara students in 1978 were parents.[11] Further, the delayed entry student, more mature in years, tends to study part-time.

- governmental: the regulations governing the principal governmental source of financial aid define a full-time student as one taking three or more courses, and full-time students are eligible for aid ... so why take more than three courses? In all Tables, full-time Academic students are those taking four or more courses.

Career/Technical

In 1978, 67% of the Career/Technical students were enrolled on a full-time basis and 33% on a part-time basis. Both full-time and part-time enrolment has increased steadily over the period. This increase is a result of the addition of specific programs at Langara and King Edward, or the duplication of existing courses. Career/Technical enrolment at these two campuses has averaged 1,334 students each year, or approximately 8% of the total Vancouver Community College enrolment.

When Career/Technical enrolment through Continuing Education is included in the Career/Technical total, only 36% of Career/Technical students are full-time and over 64% are part-time. The overall Career/Technical enrolment has varied between 1975 and 1978, averaging 2,900 students each year, approximately 16% of the total Vancouver Community College enrolment.

---

11. Student Survey, 1978 (Question 29).

TABLE 4 VANCOUVER COMMUNITY COLLEGE: REGISTRANTS (HEADCOUNT) BY PROGRAM BY FULL/PART-TIME STATUS

Source: V.C.C., Regional Office Files.

Notes:

* Withdrawals are not included for Vocational and Continuing Education programs.

* Withdrawals are included for Academic, College Foundations, English Language Training and Career/Technical programs.

* Vancouver School of Art registrants are not included.

* 1978 Continuing Education registrants are preliminary totals which can be expected to increase when tabulations have been completed.

* In 1978 many Career/Technical programs were reclassified to Vocational so that the 1978 full and part-time Vocational enrolment has been increased through the addition of approximately 500 Career/Technical students.

* The definition of a full and part-time student is not consistent among College campuses:

V.V.I.:	a full-time student has 30 contact hours per week of instruction; a part-time student something less.
K.E.C.:	a full-time student enrolled in Vocational and English Language training has 30 contact hours per week of instruction; a part-time student something less.
	In College Foundations a full-time student enrols in four or more courses; a part-time student something less.
Langara:	a full-time student enrols in four or more courses; a part-time student is something less.
C.E.:	all students are considered part-time.

TABLE 4. VANCOUVER COMMUNITY COLLEGE: REGISTRANTS (HEADCOUNT) BY PROGRAM BY FULL/PART-TIME STATUS

October Headcount
(% is a proportion of total registrants by year)

PROGRAM		1975		1976		1977		1978	
		Actual	%	Actual	%	Actual	%	Actual	%
Academic	Full-Time	2,127	11.8	1,853	11.0	1,753	9.9	1,729	9.4
	Part-Time	1,662	9.2	1,659	9.9	1,811	10.3	1,939	10.6
	Program Total	3,789	21.0	3,512	20.9	3,564	20.2	3,668	20.0
Career/Technical	Full-Time	904	5.0	978	5.8	983	5.6	1,042	5.6
	Part-Time	247	1.4	316	1.9	353	2.0	516	2.8
	Program Total	1,151	6.4	1,294	7.7	1,336	7.6	1,558	8.4
College Foundations	Full-Time	282	1.5	275	1.6	230	1.3	291	1.6
	Part-Time	995	5.5	1,038	6.2	829	4.7	895	4.8
	Program Total	1,277	7.0	1,313	7.8	1,059	6.0	1,186	6.4
Vocational	Full-Time	1,558	8.6	1,683	10.0	1,905	10.8	2,098	11.4
	Part-Time	227	1.3	373	2.2	206	1.2	642	3.5
	Program Total	1,785	9.9	2,056	12.2	2,111	12.0	2,740	14.9
English Language Training	Full-Time	220	1.2	290	1.7	325	1.8	250	1.5
	Part-Time	3,883	21.5	2,175	13.0	2,596	14.7	2,741	14.9
	Program Total	4,103	22.7	2,465	14.7	2,921	16.5	2,991	16.4
Continuing Education									
General Interest	Part-Time	1,891	10.5	2,141	12.8	2,425	13.7	1,849	10.1
Career/Technical	Part-Time	1,786	9.9	1,801	10.7	1,306	7.4	1,370	7.4
Vocational	Part-Time	2,286	12.6	2,202	13.2	2,923	16.6	3,013	16.4
	Program Total	5,963	33.0	6,144	36.7	6,654	37.7	6,232	33.9
Total: All Programs		18,068	100.0	16,784	100.0	17,645	100.0	18,375	100.0

Continuing Education Career/Technical enrolment was greater than the total Career/Technical enrolment at Langara and King Edward until 1977, when it fell below that of these two campuses. Continuing Education enrolled 1,786 Career/Technical students in 1975 and 1,370 students in 1978, a 23% decline over the four years. It is likely that the reclassification of Career/Technical programs to Vocational programs in 1978 contributed to the decline.

College Foundations

This program area accounts for approximately 6% of the total Vancouver Community College enrolment in 1978, of which 75% are part-time students. Both full-time and part-time enrolments have varied considerably over the 1975 to 1978 period, with no consistent pattern of enrolment change. It would appear that College Foundations enrolment fluctuates more than many program areas, perhaps a reflection of:

- increase/decrease in demand for the unskilled and comparatively untutored worker in the labour force;
- re-entrance of individuals into the labour force or educational stream (i.e. married women with grown children);
- societal emphasis upon and perception of documented educational qualification;
- since 1977, part-time enrolment has been affected by the addition of secondary school completion courses offered by the Vancouver School Board;
- peer pressure;
- good public relations.

Vocational

Vocational enrolment has increased significantly between 1975 and 1978 and is the fastest growing program area with a 54%

enrolment increase over the four years.[12] Although full-time vocational enrolment has shown a steady increase, part-time enrolment has almost trebled over the period.

This trend is echoed when Continuing Education Vocational enrolment is considered. Continuing Education enrolled 727 more Vocational students in 1978 than in 1975, a 32% change which is the largest enrolment shift of the three Continuing Education programs offered (Career/Technical, Vocational and General Interest).

The significance of Continuing Education Vocational enrolment can be ascertained when it is noted that part-time Continuing Education enrolment in 1978 came within 600 of the total full-time and part-time Academic enrolment ... which is the largest single program area at Vancouver Community College.

The total full-time and part-time Vocational enrolment at all Vancouver Community College campuses now comprises 31% of the Vancouver Community College enrolment.

An underlying reason for the marked growth in Vocational enrolment is attitudinal, in that our society is placing a higher value upon "job specific" training. This trend is supported and fed by governmental policy and by the practice of the College (i.e. the movement of the Vancouver Vocational Institute into part-time offering, the utilization of Vocational R.A.C. funds, etc.).

English Language Training

Part-time enrolment accounts consistently for a high proportion of the total enrolment in this program area. In 1978, over 90% of the English Language Training students were part-time.

---

12. Again, it must be emphasized that about 500 Career/Technical students were reclassified to Vocational in 1978.

A budget cut between 1975 and 1976 almost halved the number of part-time students in the English Language Training program and reduced the overall Vancouver Community College enrolment by approximately 1,700 students, or 10%.

Full-time enrolment has fluctuated over the period and in 1978 was close to the 1975 level of enrolment after increasing in 1976 and 1977.

The principal factor contributing to enrolment is federal immigration policy and the cumulative effect of the large number of non-English speaking people who reside in the Greater Vancouver region.

Continuing Education

All of the Continuing Education students take courses on a part-time basis. Their numbers have increased steadily from 1975 to 1978, with a 4% increase over the period. Overall, the Continuing Education program area accounts for over 33% of the total Vancouver Community College enrolment in 1978.

When viewed separately, the three program offerings in Continuing Education show unique enrolment trends. General Interest programs have had fluctuations in enrolment, with the 1978 enrolment dropping below the 1975 level after a 13% increase in 1976, and a 28% increase in 1977 from the 1975 level. In part, at least, the 1978 decline may be attributed to space constraint at Langara, with space priority going to Academic and Career/Technical areas. Career/Technical enrolment through Continuing Education has declined since 1975, dropping 23% in the four years to 1978. Continuing Education Vocational enrolment has been increasing since 1976, with a 33% increase between 1976 and 1977; the 1978 enrolment shows a 32% increase over the 1975 Vocational enrolment.

It is postulated that more than any other program area

Continuing Education enrolment depends upon the appropriateness of the match between the interests of the populace, the availability of programming through other agencies (i.e. school boards, U.B.C., B.C.I.T., etc.) and the type of courses offered by the College. For instance, it may be that Vancouver Community College has maintained a high and increasing Vocational enrolment in the Continuing Education area owing to the College's specialized facilities and expertise which are not available in other post-secondary institutions.

A summary observation of part-time enrolment by program area indicates that between 1975 and 1978 enrolment tended to fluctuate rather than trend. This may be a result of the susceptibility of part-time enrolment to policy decisions, changing course offerings, course scheduling, space constraints and other similar factors. As well, the decision to enrol as a part-time student affects the lifestyle of a person to a lesser extent than full-time enrolment, so that part-time enrolment decisions are more easily altered.

TABLE 5A[13] VANCOUVER COMMUNITY COLLEGE:
REGISTRANTS (HEADCOUNT) BY PROGRAM BY AGE

As recorded in Table 5A, student enrolment declines as age increases, so that the majority of College students are aged 15 to 24. The largest single age group of students are those between 20 and 24, followed by those aged 15 to 19.[14]

High enrolment totals in these two age groups can be explained by a desire for training prior to labour force entry and the high labour force unemployment rates for those aged 15 to 24. The unemployment rate in British Columbia for those aged 15 to 19 was 19% in 1976 and 18.7% in 1977; the highest rate for all age groups in each of those years. For those aged 20 to 24 the British Columbia unemployment rate was 12.2% in 1976 and 12.4% in 1977. These rates compare to the lowest rates of 5.6% for those aged 45 to 54 in 1976 and 5.1% for those aged 35 to 44 in 1977.[15]

When enrolment by age of student is analyzed within program areas, some changes are noted over the four years 1975 to 1978.

---

13. Actual student enrolment is recorded in TABLE 5B, VANCOUVER COMMUNITY COLLEGE: REGISTRANTS (HEADCOUNT) BY PROGRAM BY AGE included in Technical Report Appendix 2.

14. With reference to TABLE 5A, 1976 was the single year in which enrolment by age groups was calculated for all students enrolled in Vocational programs, which accounts for the differences in the enrolments reported between 1975 and 1978. It is, therefore, not possible to determine a pattern of enrolment by age for Vocational students in that time period.

    As well, TABLE 5A does not record English Language Training or Continuing Education enrolments, which are programs predominantly composed of part-time students, so it is difficult to establish a clear picture of part-time enrolments by age. However, it may be assumed that the general trend of declining enrolment by age groups would apply, could this data be included.

15. Unemployment rates vary by region. Information for Metropolitan Vancouver was not calculated separately from British Columbia totals, by age groups, until January 1978.

    [Source: Statistics Canada, The Labour Force, Catalogue No. 71-001]

TABLE 5A VANCOUVER COMMUNITY COLLEGE: REGISTRANTS (HEADCOUNT) BY PROGRAM BY AGE

Source: B.C. Provincial Government Statistical Report Forms (October 31st Statistics)

Notes:

* Withdrawals are not included for Vocational and Continuing Education programs.

* Withdrawals are included for Academic, College Foundations, English Language Training and Career/Technical programs.

* Vancouver School of Art, Continuing Education and English Language Training registrants are not recorded.

* 1976 is the single year in which all Vocational enrolment was reported by age.

* Headcounts include both first and second year students.

* The definition of a full and part-time student is not consistent among College campuses:

V.V.I.: a full-time student has 30 contact hours per week of instruction; a part-time student something less.

K.E.C.: a full-time student enrolled in Vocational and English Language Training has 30 contact hours per week of instruction; a part-time student something less.

In College Foundations, a full-time student enrols in four or more courses; a part-time student something less.

Langara: a full-time student enrols in four or more courses; a part-time student something less.

C.E.: all students are considered part-time.

TABLE 5A. VANCOUVER COMMUNITY COLLEGE: REGISTRANTS (HEADCOUNT) BY PROGRAM BY AGE

October Headcount
(% is a proportion of total registrants by program area)

AGE %	ACADEMIC		CAREER/TECHNICAL		COLLEGE FOUNDATIONS		VOCATIONAL	
	Full-time	Part-Time	Full-Time	Part-Time	Full-Time	Part-Time	Full-Time	Part-Time
1975								
15-19	25.3	5.9	23.8	1.5	9.9	30.1	-	-
20-24	23.3	17.5	36.7	7.4	6.3	25.5	-	-
25-29	5.4	9.4	12.8	4.6	2.3	11.0	-	-
30 +	2.2	11.0	7.3	5.9	2.7	12.2	-	-
	100%		100%		100%			
1976								
15-19	26.5	7.6	23.1	1.7	9.6	23.8	8.9	3.6
20-24	20.5	18.2	35.6	8.6	7.9	27.4	17.3	14.2
25-29	4.2	9.9	9.8	5.5	1.9	12.4	9.9	9.9
30 +	1.6	11.5	8.2	7.5	1.5	15.5	15.7	20.5
	100%		100%		100%		100%	
1977								
15-19	27.3	9.2	23.5	2.1	13.2	24.1	-	-
20-24	17.0	18.8	34.5	10.2	6.2	26.8	-	-
25-29	3.2	11.0	8.7	6.8	1.5	11.8	-	-
30 +	1.7	11.8	6.7	7.5	.8	15.6	-	-
	100%		100%		100%			
1978								
15-19	27.2	10.0	23.3	3.5	11.6	25.6	-	-
20-24	16.3	19.6	29.2	9.4	5.9	22.5	-	-
25-29	2.2	9.9	9.3	6.9	3.4	10.7	-	-
30 +	1.6	13.2	6.2	12.2	4.1	16.2	-	-
	100%		100%		100%			

TABLE 6A[16] VANCOUVER COMMUNITY COLLEGE: REGISTRANTS (HEADCOUNT) BY PROGRAM BY SEX

Yearly enrolment expressed as percentages is described by sex in Table 6A for the period 1975 to 1978.[17]

In the years 1975 to 1978, Vancouver Community College's female enrolment has increased as a proportion of total enrolment, from 49% in 1975 to 56% in 1978. This change is primarily a result of the significant increase in part-time female enrolment.

The trend is most marked in the Career/Technical program where part-time female enrolment more than doubled from 1975 to 1978. A smaller increase of 14% took place in the Academic area and 11% in the College Foundations area. Part-time male enrolment, on the other hand, decreased in the College Foundations program by 19% and in the Academic program by 15%; part-time male Career/Technical enrolment almost doubled over the four years, echoing the trend in part-time female enrolments.

Full-time College Foundations enrolments were relatively stable for both male and female students between 1975 and 1978. However, both male and female full-time enrolments decreased significantly in the Academic program by 25% and 11% respectively. Full-time male Career/Technical enrolment increased by 21% and full-time female by 20% over the four years.

---

16. Actual student enrolment is recorded in TABLE 6B, VANCOUVER COMMUNITY COLLEGE: REGISTRANTS (HEADCOUNT) BY PROGRAM BY SEX, included in Technical Report, Appendix 2.

17. TABLE 6A does not record English Language Training or Continuing Education enrolments, which are programs predominantly composed of part-time students.

    As with TABLE 5A, 1976 was the single year in which enrolment by sex was gathered for all Vocational students, which accounts for the difference in enrolments reported from 1975 to 1978.

TABLE 6A VANCOUVER COMMUNITY COLLEGE: REGISTRANTS (HEADCOUNT) BY PROGRAM BY SEX

Source: B.C. Provincial Statistical Report Forms (October 31st Statistics)

Notes:

* Withdrawals are not included for Vocational and Continuing Education programs.

* Withdrawals are included for Academic, College Foundations, English Language Training and Career/Technical programs.

* Vancouver School of Art, Continuing Education, and English Language Training registrants are not recorded.

* 1976 is the single year in which all Vocational enrolment was reported by sex.

* Headcounts include both first and second year students.

* The definition of a full and part-time student is not consistent among College campuses:

V.V.I.: a full-time student has 30 contact hours per week of instruction; a part-time student something less.

K.E.C.: a full-time student enrolled in Vocational and English Language Training has 30 contact hours per week of instruction; a part-time student something less.

In College Foundations, a full-time student enrols in four or more courses; a part-time student something less.

Langara: a full-time student enrols in four or more courses; a part-time student something less.

C.E.: all students are considered part-time.

TABLE 6A. VANCOUVER COMMUNITY COLLEGE: REGISTRANTS (HEADCOUNT) BY PROGRAM BY SEX

October Headcount
(% is a proportion of total registrants by program area)

SEX · %	ACADEMIC Full-Time	ACADEMIC Part-Time	CAREER/TECHNICAL Full-Time	CAREER/TECHNICAL Part-Time	COLLEGE FOUNDATIONS Full-Time	COLLEGE FOUNDATIONS Part-Time	VOCATIONAL Full-Time	VOCATIONAL Part-Time
1975								
Male	32.6	16.8	33.8	8.3	11.9	45.5	—	—
Female	23.5	27.1	46.8	11.1	9.2	33.4	—	—
	100%		100%		100%			
1976								
Male	31.0	18.6	33.0	10.5	12.5	39.6	26.9	20.5
Female	21.9	28.5	43.7	12.8	8.5	39.4	24.8	27.8
	100%		100%		100%		100%	
1977								
Male	28.9	20.1	31.3	13.3	12.7	37.9	—	—
Female	20.3	30.7	42.2	13.3	9.0	40.4	—	—
	100%		100%		100%			
1978								
Male	25.3	20.6	28.7	13.9	12.8	37.1	-	-
Female	22.0	32.1	39.3	18.1	12.1	38.0	-	-
	100%		100%		100%			

Over the four year period, there was a general shift from full-time to part-time enrolment by all age groups in the Academic and Career/Technical programs.

The Academic programs show a significant reduction of full-time, 20 to 24 year old enrolment, which has moved to part-time enrolment. Associated with this have been proportionate increases among other age groups, most markedly the 15 to 19 year olds, who have tended to choose part-time over full-time Academic enrolment.

The Career/Technical part-time enrolment by those aged 20 to 24 also shows increases, but more significant is the increased tendency by those over 30 years old to enrol in part-time courses.

The College Foundations program enrolment does not tend to change in the same way as the Academic or Career/Technical enrolments. Full-time College Foundations enrolment has maintained a relatively constant 20% of the program enrolment from 1975 to 1977, which increased to 25% in 1978. The age group distribution of full-time enrolment has also remained relatively constant. Part-time College Foundations enrolment by those under 19 has declined from 1975 to 1978, while part-time enrolment by those over 25 has increased.

TABLE 7A[18] VANCOUVER COMMUNITY COLLEGE: ACADEMIC ATTRITION BETWEEN 1ST AND 2ND YEAR REGISTRANTS

A marked trend within the Academic program area is the apparent high attrition rate between first and second year enrolments. Table 7A illustrates this consistent trend between 1975 and 1978, which is characterized by:

a) Higher attrition among full-time than among part-time students. In general, students tend to leave Vancouver Community College or transfer to a university upon completion of the first year Academic program. Far fewer students transfer after completing the second year of the program. Part-time students, meanwhile, tend to remain first year registrants for a longer period of time than full-time students, as they continue toward first year completion on a part-time basis.

b) Similar attrition rates for males and females of both full-time and part-time status. This noteworthy similarity is not a universal characteristic of such data, which implies that the full-time or part-time status is a more important determining variable of Vancouver Community College's Academic attrition than the sex of the student.

c) There was a peak attrition between 1977 first year registrants and 1978 second year registrants, with an 89% rate for full-time males and an 85% rate for full-time females. The meaningful commencement year of Table 7A (1976) is coincidental with a revision of re-admission policy

18. TABLE 7B, VANCOUVER COMMUNITY COLLEGE: ACADEMIC REGISTRANTS (HEADCOUNT) BY 1ST AND 2ND YEAR, included in Technical Report, Appendix 2.

TABLE 7A. VANCOUVER COMMUNITY COLLEGE: ACADEMIC ATTRITION BETWEEN 1ST & 2ND YEAR REGISTRANTS

	1975		1976		1977		1978	
	Male	Female	Male	Female	Male	Female	Male	Female
1st Year FULL-TIME	1013	730	896	618	884	614	824	710
PART-TIME	521	868	512	807	586	905	634	1000
Actual Attrition % 2nd Year FULL-TIME			176 82.6	139 81.0	135 84.9	104 83.1	97 89.0	91 85.2
PART-TIME			131 74.9	178 79.5	125 75.6	179 77.8	115 80.4	172 81.0

VANCOUVER COMMUNITY COLLEGE: TOTAL ACADEMIC ATTRITION BETWEEN 1ST & 2ND YEAR REGISTRANTS

	1975	1976	1977	1978
TOTAL REGISTRANTS 1ST YEAR	3,132	2,883	2,989	3,168
TOTAL REGISTRANTS 2ND YEAR		624 80.1	543 81.2	475 84.1

designed to stabilize enrolment in the face of the continuing increase in demand for Academic offerings. The revision did not alter criteria for initial admission, but it has (as was intended) made it increasingly difficult for low-achieving students to be re-admitted, term by term, and to move from first to second year.

d) Increasing attrition rates are evidenced for Academic students between 1975/1976, 1976/1977 and 1977/1978. As in (c) above.

The high rate of Academic attrition explains, in part, the larger proportion of younger students in this program area than in any other offered by Vancouver Community College.

It must be noted that the wisdom ... even validity ... of distinguishing between first and second year in the College context, has long been open to question. Only a minority of the Academic course offerings have post-secondary prerequisites or must be taken sequentially. Further, the definition of "second year" for reporting purposes is such that it includes in "attrition": termination owing to low achievement, transfer to university or other post-secondary institution upon completion of first year, and all students for whom something short of second year enrolment (as defined for reporting purposes) is the goal.

2. Vancouver Community College Participation Rates

As discussed in Section C1 of the Report, certain changes in the size and composition of Vancouver Community College's student body were discerned from analysis of College enrolment data between 1975 and 1978.

While enrolment has been increasing steadily since 1976, concurrently, composition of the student body has also been changing gradually. In terms of overall enrolment at Vancouver

Community College, for instance, it was noted that the percentage of women students increased from 49% in 1975 to 56% in 1978, and that the average age of students had tended to increase. Within program areas changes in the student body were also noted. The percentage of part-time students, for instance, has increased markedly in most programs over the four years. This trend is strongest in part-time Vocational enrolment, where a 45% increase is recorded. In the case of the Academic programs, this trend has reversed the full-time/part-time composition from 56% full-time in 1975 to 53% part-time in 1978.

Changes in the size and composition of the Vancouver Community College student body result from policy decisions affecting programs and services offered by the College, the composition of the catchment area population which Vancouver Community College serves, and student preferences for education; all of which have impact on the pattern of enrolment through time.

In light of the variety of factors which influence the demand for post-secondary education, how can Vancouver Community College best assess its enrolment trends and determine the implications of those trends for the future?

Obviously, there is no easy answer to the question, for we lack complete understanding of the complex inter-relations of factors which have caused College enrolment to change through time.

It is necessary, therefore, to utilize a method which allows for the complexity of demand to be simplified. The statistical measure used commonly to express this complexity is the "participation rate", which acts as a surrogate measure of the combined effect of student choices concerning education and the response of the particular institution to those expressed choices.

The participation rate is the numeric relationship between enrolment and the population from which that enrolment is drawn. It helps to place Vancouver Community College in the context of the community it serves, as the participation rate allows the College to monitor its own enrolment trends, using existing College data in combination with data resources in the community.

The importance of relating Vancouver Community College enrolment to the community from which that enrolment is drawn, must be stressed. During the 1960s, the Greater Vancouver Regional population grew at a rate of approximately 3% per year. The main thrust of College planning during that time was to keep up with this growth and accommodate backlog through the expansion of facilities and programming. Between 1971 and 1976, however, the Regional growth rate slowed to approximately 1% per year, which indicates a need for some re-evaluation of College planning.

Although the Regional growth rate is approximately 1% per year, this figure tends to camouflage important changes in the spatial distribution and the age composition of this growth. As illustrated by Figures 5 through 9, the spatial distribution and age composition of the Regional population shows unique Sub-Regional characteristics when viewed by individual municipalities.

In general, the central municipalities in the Region are largely built up. Consequently, the larger increase in population growth will occur in the outlying municipalities. Between 1971 and 1976 Richmond's population increased by 31% and the Surrey/Delta/White Rock population by 25%. In comparison, Burnaby's population increased by 5%, as did the North Shore. Over the five year period, Vancouver's population declined by almost 3%. As Vancouver is the primary catchment area for Vancouver Community College, and is its designated "College Region", Vancouver's population decline and the overall spatial differentiation of Regional growth is of considerable relevance to College planning.

Figure 5 Vancouver Population aged 15 to 44

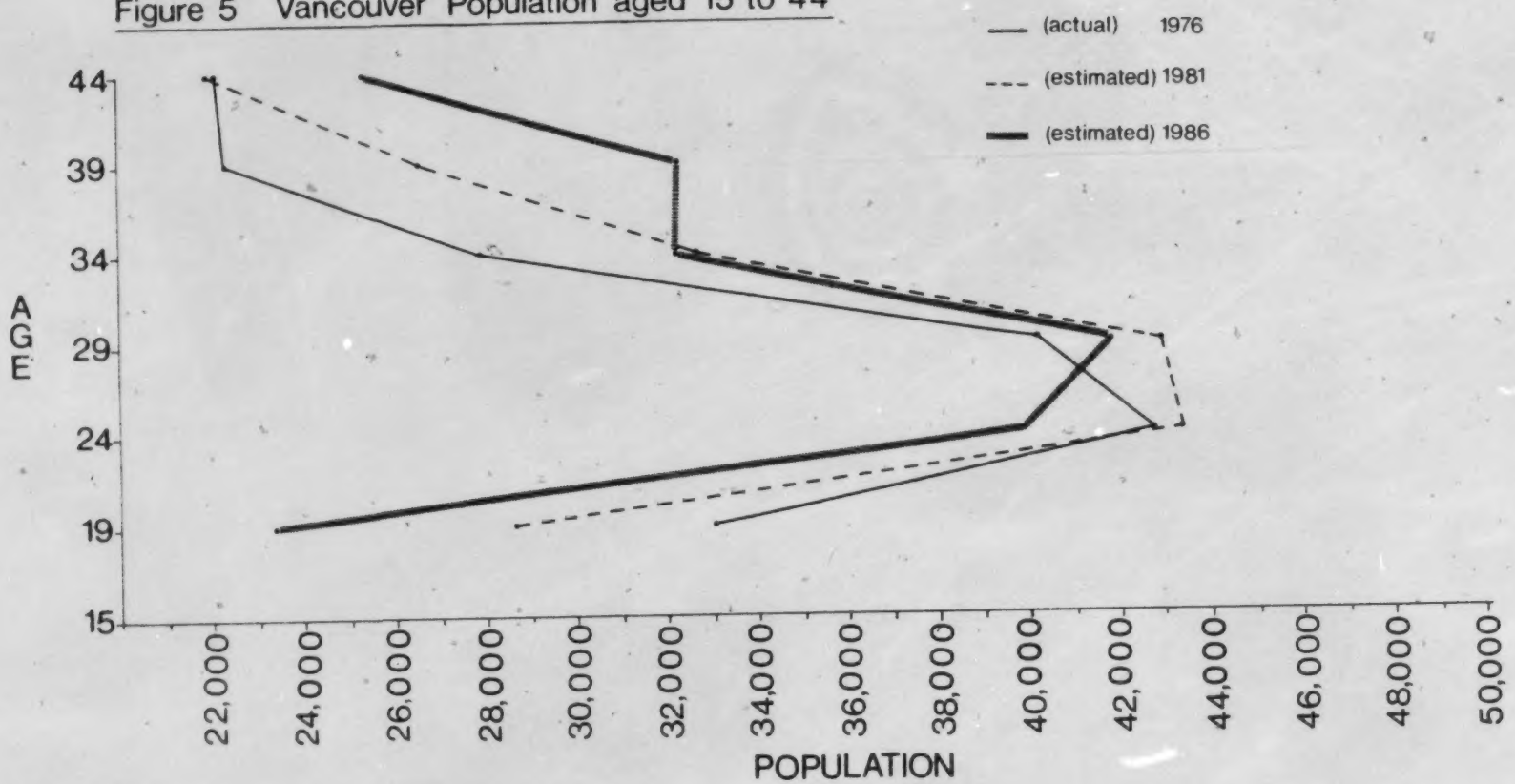


Figure 6 Greater Vancouver Region Population aged 15 to 44 (excluding Vancouver)

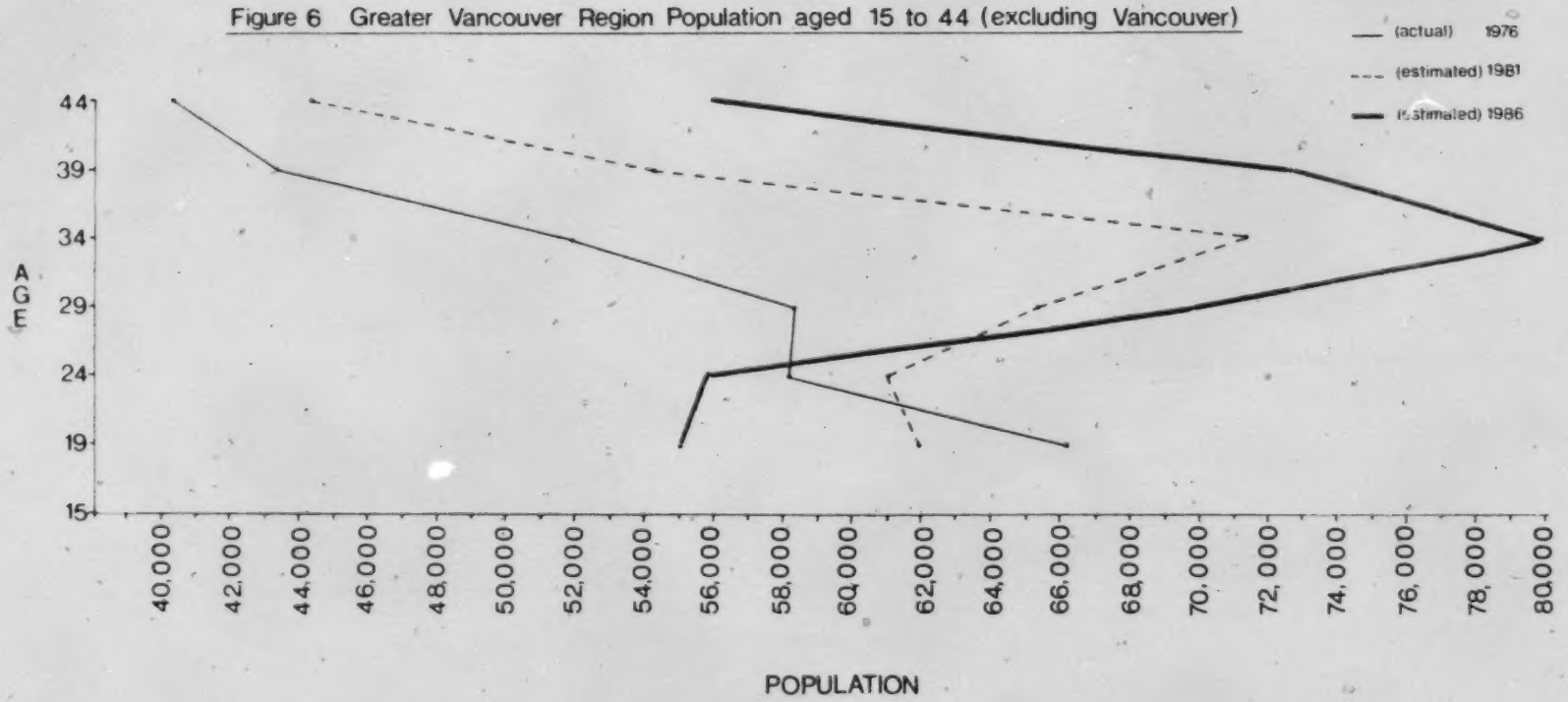


Figure 7 Burnaby Population aged 15 to 44

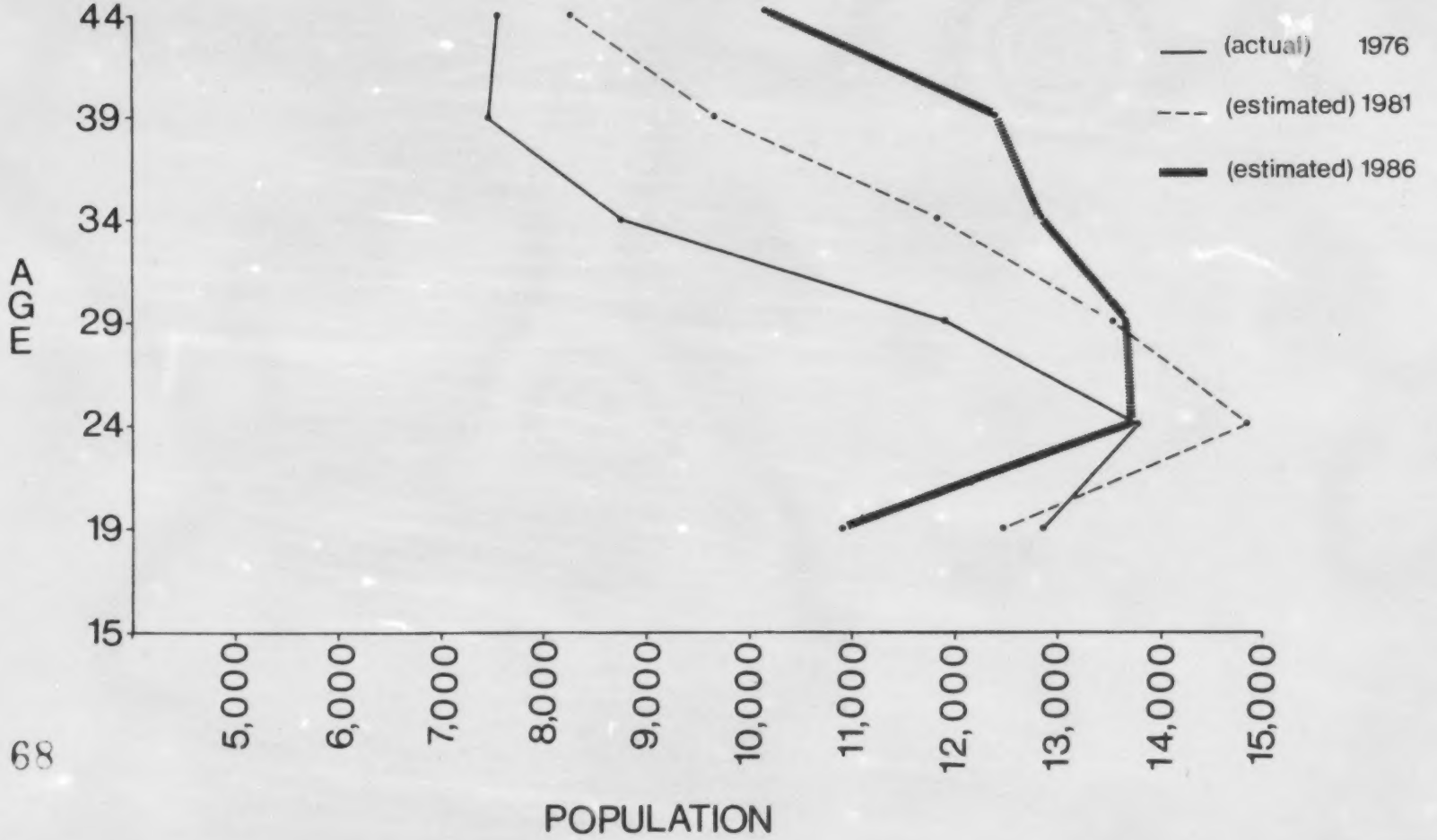


Figure 8 North Shore Population aged 15 to 44

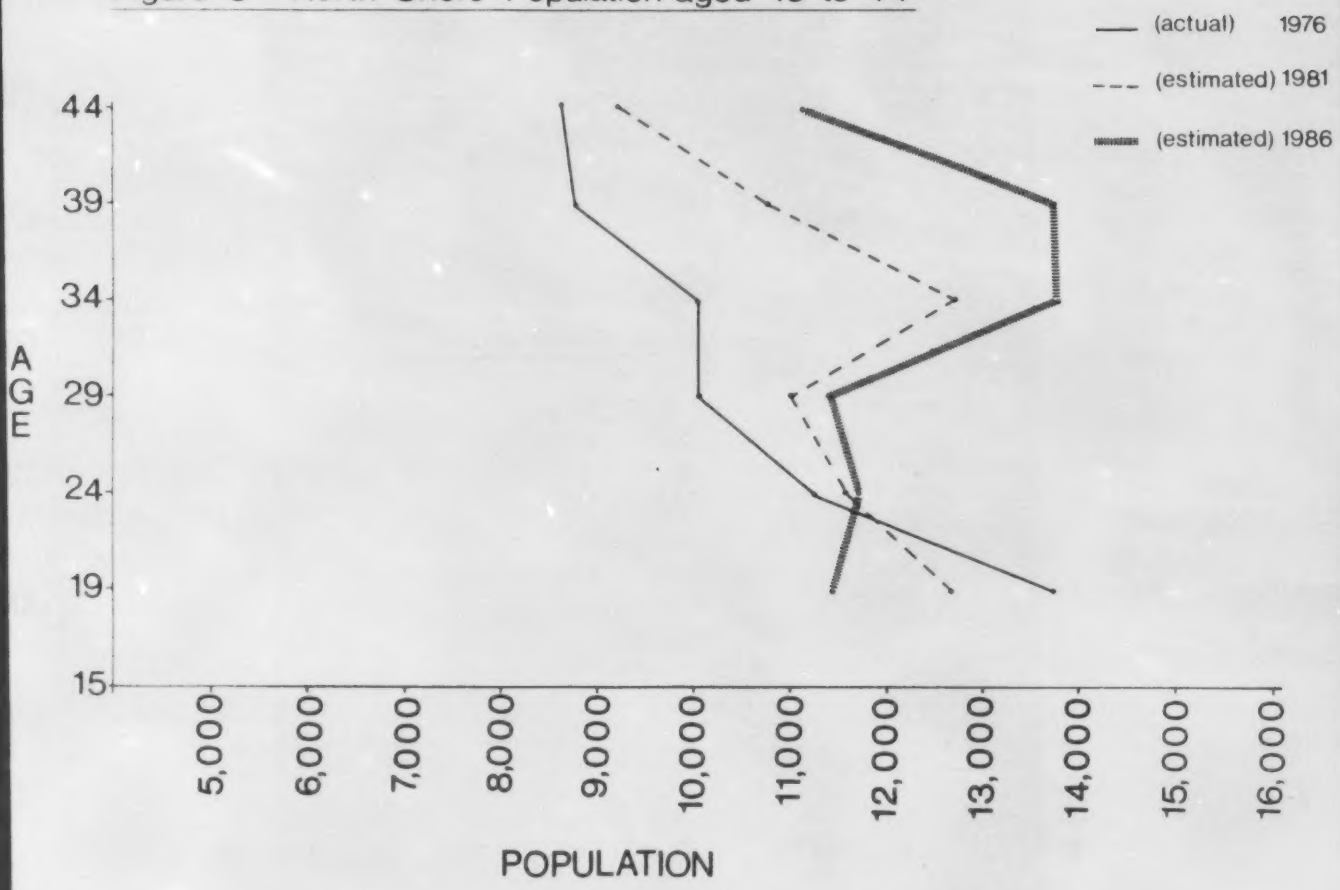
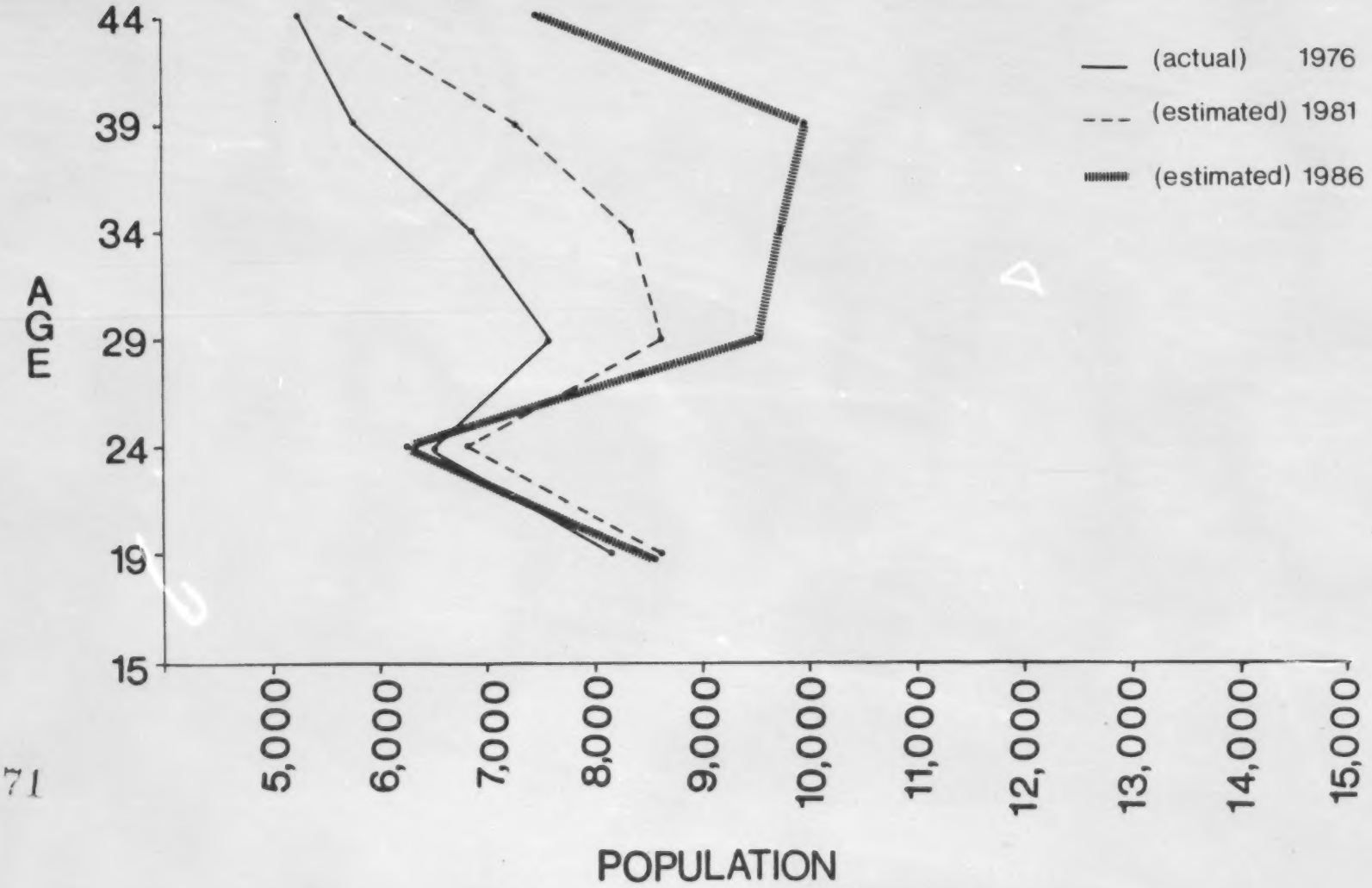


Figure 9 Richmond Population aged 15 to 44



Just as total population growth is not consistent among municipalities, so there are important differences in the age composition of population change between municipalities. Again, using Vancouver as the example, the population under 15 years of age declined by 18% between 1971 and 1976. A decline of 3% of those aged 15 to 24 also occurred. However, Vancouver's population aged 25 to 29 increased by 21% and those aged 30 to 34 increased by 13% over the five year period. As Vancouver Community College's enrolment is presently drawn primarily from the 15 to 24 year old group, the decline in this cohort is of import. For the future, the marked decline in Vancouver's population under 15 years of age will have impact on College enrolment as this group eventually reaches the appropriate age for post-secondary enrolment.[19]

The participation rate statistic may be calculated to show a gross relationship such as that between total College enrolment and the Regional population in the College catchment area, or more subtle relationships such as enrolment in individual programs by students of particular ages from specific areas within the Region. Once the appropriate relationships are determined and the participation rates calculated, these statistics then become a tool for use in various aspects of College planning.

The participation rate statistic may be used by Vancouver Community College to:

- indicate changes in enrolment trends through time.
- monitor the effectiveness of policy decisions made by the College in student recruitment, curriculum, program delivery, etc..
- pinpoint potential problems should no policy changes be made by the College.

---

19. Statistics Canada, Census Tract Data, 1971 and 1976.

- evaluate the possible effects of alternative College policies prior to a final decision being made.
- heighten awareness of changes in the community from which College enrolment is drawn.

The participation rate allows for the complexities of demand for post-secondary education to be simplified. The advantage is that it may be refined and made considerably more accurate a tool through review and amendment as the community changes and knowledge of College practice increases and becomes more explicit.

For the purpose of the Task Force Report, the participation rate has been used for estimating future College enrolment in 1981 and 1986. Essentially, this is done by applying the derived historic participation rate to the appropriately aged population forecast for the College catchment area in those two years.

Implicit in the use of the participation rate for estimating future enrolment is the assumption that there will be no major changes in College policy or physical capacity which will affect the entrance or attrition rate within the College. As well, it is assumed that students' expressed preferences for education will continue into the future in the same pattern as in the past.

These assumptions are the major limitations of the "participation rate" and are common to all methods of forecasting future state: forecasting is the art of estimation not prediction. It is incumbent upon those who use the participation rate as a forecasting tool to revise estimates in the light of new knowledge over time, particularly as College policy changes.

Detailed calculations of the Vancouver Community College participation rates are described in Technical Report, Appendix 3.[20]

---

20. Base population data utilized drawn from: Population and Housing Forecasts 1976-1991, G.V.R.D. Planning Department, February 1978; and, Population, Household, Employment and Labour Force Estimates, G.V.R.D. and Sub-Regions, 1976-1971, Technical Memorandum #14, G.V.R.D. Planning Department, September 1978.

The left-hand column of Table 8 summarizes the derived rates by College catchment areas and College programs for 1976 to 1978.

Some preliminary comment may be made from the participation rates as recorded in Table 8:

a) Vancouver Community College Regional participation rate increased by 5.76% between 1976 and 1978, suggesting that College enrolment grew at a faster pace between those years than did the Regional catchment area population from which Vancouver Community College enrolment was drawn.[21]

b) As total Regional population grows, its size and age composition throughout the Region changes. Thus, the Sub-Regional participation rates reflect these differences in composition of the population as they affect total enrolment at Vancouver Community College.

Although each of the Sub-Regional participation rates have increased between 1976 and 1978, they have not all changed at the same rate. The largest increase was in Vancouver, which experienced an 8% change in its participation rate. This was a result of the small growth in Vancouver's population aged 15 to 44 (2,398 people or 1.26% from 1976 to 1978), and an increasingly strong attraction of Vancouver Community College to the Vancouver community between the two years.

---

21. As noted in Technical Report, Appendix 3, the Greater Vancouver Region includes the City of Vancouver, University Endowment Lands, Burnaby, New Westminster, Richmond, Delta, White Rock, Surrey, North Vancouver City and District, West Vancouver, Port Moody, Port Coquitlam, Lions Bay, Bowen Island and Ioco-Buntzen. This area corresponds to the boundaries of the Greater Vancouver Regional District Authority and is illustrated by Map 1, Section B.5 of the Report.

TABLE 8. VANCOUVER COMMUNITY COLLEGE: PARTICIPATION RATES, 1976 & 1978, AND ENROLMENT PROJECTIONS TO 1981 & 1986

Participation Rates		Participation Rates 1976 (%)	Participation Rates 1978 (%)	V.C.C. Enrolment 1978 (Actual)		Enrolment Projections To 1981 (Estimated)	Enrolment Projections To 1986 (Estimated)
REGIONAL Participation Rate		3.30	3.49	18,375 Total V.C.C. Enrolment from the Region		19,352	20,390
SUB-REGIONAL Participation Rates							
	Vancouver	6.80	7.35	14,149		14,427	14,334
	Burnaby	1.89	1.97	1,286		1,391	1,454
	Richmond	2.10	2.19	919		994	1,126
	Remainder of Region	.85	.89	2,021		2,156	2,350
				18,375	100% of total Enrolment	18,968	19,264
PROGRAM Participation Rates							
ACADEMIC							
Full-time	Direct Entry: Vancouver	15.40	15.17	610		558	449
	Direct Entry: Remainder of Region	1.75	1.84	153		149	116
	Mature Student: Vancouver	.48	.37	591		620	635
	Mature Student: Remain. of Region	.07	.05	148		148	167
	Part-time: Vancouver	.85	.96	1,551		1,610	1,648
	Part-time: Remainder of Region	.13	.14	388		415	468
				3,441	94% of program Enrolment	3,500	3,483
CAREER/TECHNICAL							
Full-time	Direct Entry: Vancouver	3.76	4.60	185		169	136
	Direct Entry: Remainder of Region	.43	.55	46		45	35
	Mature Student: Vancouver	.36	.34	549		570	584
	Mature Student: Remain. of Region	.06	.05	137		148	167
	Part-time: Vancouver	.16	.26	413		436	446
	Part-time: Remainder of Region	.02	.04	103		119	134
				1,433	92% of program Enrolment	1,487	1,502

TABLE 8. (cont'd)

Participation Rates	Participation Rates 1976 (%)	Participation Rates 1978 (%)	V.C.C. Enrolment 1978 (Actual)		Enrolment Projections To 1981 (Estimated)	Enrolment Projections To 1986 (Estimated)
COLLEGE FOUNDATIONS						
Full-time: Vancouver	.29	.31	233		223	196
Full-time: Remainder of Region	.04	.03	58		37	33
Part-time: Vancouver	.57	.49	716		723	673
Part-time: Remainder of Region	.09	.05	179		130	130
			1,186	100% of program Enrolment	1,113	1,032
ENGLISH LANGUAGE TRAINING						
Full-time: Vancouver	.14	.12	200		209	204
Full-time: Remainder of Region	.02	.02	50		63	67
Part-time: Vancouver	1.11	1.36	2,193		2,280	2,334
Part-time: Remainder of Region	.17	.20	548		593	668
			2,991	100% of program Enrolment	3,145	3,273
VOCATIONAL						
Full-time: Vancouver	.86	.74	1,259		1,289	1,255
Full-time: North Shore	.45	.38	210		223	236
Full-time: Burnaby	.40	.33	189		206	210
Full-time: Remainder of Region	.30	.25	440		482	519
			2,098	77% of program Enrolment	2,200	2,220
CONTINUING EDUCATION						
Part-time: Vancouver	2.86	2.82	4,549		4,728	4,841
Part-time: Burnaby	1.00	.95	499		552	598
Part-time: Remainder of Region	.58	.55	1,184		1,145	1,492
			6,232	100% of program Enrolment	6,425	6,931

(Note: See Appendix 3 for detailed calculations of the Participation Rates and Enrolment Projections)

Burnaby, Richmond and the remainder of the Region's population aged 15 to 44 increased by approximately 5% from 1976 to 1978, which results in lower participation rates from these Sub-Regions than that of Vancouver. However, as the Burnaby and Richmond rates both increased by approximately 4%, it is apparent that Vancouver Community College was able to strengthen its relationship with these Sub-Regions by enrolling a larger percentage of their increased populations in 1978 than in 1976. The attraction of Vancouver Community College to the remainder of the Region between 1976 and 1978 has remained stable.

c) The Program participation rates are the most detailed of the calculations, tied most specifically to changes in the age and spatial composition of the Regional population. As well, the Program participation rates best identify and reflect changes in College policy through time (see: Section B.6. Demand of the Report). Analysis of these participation rates requires a detailed knowledge of College policy, both formal and informal, in addition to a knowledge of the demographics of the Regional population.

While a thorough review of the 1976 and 1978 Program participation rates by the appropriate College staff is warranted for the purpose of College planning, this is considered outside the realm of the Task Force mandate at the present time. It is hoped that such a review will be incorporated as part of the ongoing policy development and evaluation process undertaken at Vancouver Community College, and that through this process the participation rates will be refined and made more accurate a forecasting tool for future College planning.

The righthand column of Table 8 records the estimates of Vancouver Community College enrolment to 1981 and 1986, derived from the application of the 1978 participation rates to population changes forecast for the Vancouver Community College catchment area.[22] Detailed calculations of the enrolment estimates are described in Technical Report, Appendix 3.

Three points must be emphasized when reviewing the enrolment estimates:

a) This data is an estimate of future enrolment at Vancouver Community College, not a prediction.
b) The limiting assumption of the participation rate is that over the forecast period to 1986 no major changes in College policy will be made, which will affect the entrance or attrition rate within the College.
c) The enrolments forecast for individual programs often deal with small numbers where there is a greater likelihood of incurring a large percentage error than when larger enrolments are forecast.

The enrolment estimates recorded in Table 8 suggest that overall, Vancouver Community College enrolment is not expected to increase dramatically over the forecast period to 1986. An increase in enrolment of approximately 5% is expected between 1978 and 1981, and between 1981 and 1986; this is considerably reduced from the enrolment change between 1976 and 1978 where Vancouver Community College enrolment increased at approximately 5% per year.

22. See: Technical Report, Appendix 3.

The Sub-Regional enrolment projections reflect the slowdown of growth in the central municipalities as Vancouver Community College enrolment from Vancouver declines over the forecast period 1981 to 1986, while Vancouver Community College enrolment from Burnaby remains relatively stable. Significant enrolment increases occur from the outlying Municipalities of Richmond and the remainder of the Region to 1986.

The impact of the spatial distribution of the Regional population is again pinpointed when program enrolment projections are considered. Program enrolment projections from Vancouver show declines, particularly when the projection is based on those age groups between 15 to 29.

D. COMPONENTS OF CHANGE

1. Demographic Trends[23]

Demographic trends are one of the primary factors influencing the size of the student population to be educated. The growth of the educational system over the past fifteen years has been in direct response to these trends in order to cope with the increasing demand for education.[24]

The principal demographic trend which has helped to induce the growth situation in education has been the changing age structure or composition of the population (i.e. the distribution of people among various age groups in the population). The two most important components of this trend are:

- the Post-War baby boom between 1945 and 1959, and
- the peak in the birth rate around 1960 and its decline thereafter.

The "baby boom" following the Second World War, in the period from 1945 to 1959, saw the annual number of live births increase by "... 60% from 300,600 to 479,000 ..."[25] in Canada. As the proportion of young children in the population rose significantly,

---

23. "Demography is the study of population characteristics including the spatial distribution of people, the age structure of a population, the rate at which the population reproduces itself, and the extent to which it is changed by the movement of people in and out of the territory under consideration."

    Declining Enrolment: Implications for British Columbia's Public School System, Educational Research Institute of British Columbia, A. M. Schwartz, 1977, p.57.

24. A comprehensive and clear discussion of demographic trends and their influence on the education system may be found in Canadian Population Trends and Public Policy Through the 1980s, L. O. Stone & C. Marceau, Institute for Research and Public Policy, McGill - Queen's University Press, Montreal, 1977.

25. Impact of Projected Population Trends on Post-Secondary Education, 1961-2001, Zolton Zsigmund, Education, Science & Culture Division, Statistics Canada, Ottawa, May, 1975, p.1.

the relative size of the other age groups diminished so that a population "bulge" of those born between these years can be traced through time as the children age.

It followed that the baby boom children brought changes in demand for education as they aged and moved through the education system. By the 1960s, for instance, the marked rise in the proportion of young adults in the population was altering post-secondary demand as the baby boom generation reached the 18 to 24 year old age group. A succession of such changes have (and will) continue to be induced by the baby boom generation as it moves through the age cycle in the years to come. In the past seven years, for instance, the median age in Canada has crept up from 26 to 28 years. By the end of the century it is expected to reach 35 years as the population bulge born between 1945 and 1959 ages.

The second major component of changes in the age composition of the population is the rapid decline in the birth rate starting around 1960 following the post-war baby boom. This decline in fact, "... has been more precipitous than the rise of the baby boom years".[26] For fifteen years the birth rate had soared to nearly four children per woman of child bearing age. After 1960, this figure was affected by a changing societal attitude toward child bearing, so that by 1971 in Vancouver the birth rate was below the replacement level of 2,100 children per 1,000 women, or zero population growth.

1960 was a peak birth year in Vancouver, in which the total number of children born was over 8,000 as seen in Table 10. This was a "... result of the high number of women of child bearing age

---

26. Impact of Projected Population Trends on Post-Secondary Education, 1961-2001, Zolton Zsigmund, Education, Science & Culture Division, Statistics Canada, Ottawa, May, 1975, p.3.

who were resident in Vancouver, which itself was largely a factor of the high immigration to the City during the 1950s."[27] From the 1960 peak, the annual number of births to Vancouver residents started to decline, decreasing by over 2,000 in a ten year period. Since 1970, the birth rate has fallen further and has resulted in a reduction to only 4,705 births in 1975.

Table 9. Births to Residents of Vancouver and the University Endowment Lands, 1960 to 1975

1960	8,320	1968	6,402
1961	7,321	1969	6,449
1962	7,079	1970	6,380
1963	6,855	1971	5,432
1964	6,476	1972	5,085
1965	6,345	1973	4,747
1966	6,469	1974	4,595
1967	6,300	1975	4,705

When the effects of the post-war baby boom, followed by the decline in birth rate since 1960, are reviewed together, the consequent changes in the age structure of the population can be seen.

27. Declining Enrolment: The Issues, R. A. Yates, C. Eddy, and D. Moir, Vancouver School Board, August, 1977, Chapter I "Past Trends and Enrolments", p.2.

Again using the Vancouver population as the example, the following Table 10 compares the changes in the size of population age groups from 1961 to 1976.[28]

As Table 10 illustrates, the age composition of Vancouver's population has changed over the past fifteen years. Most striking is the marked decline in the number of pre-schoolers and elementary age children in the population from 1961 to 1971. The group aged 15 to 24 years grew very significantly in size between 1961 and 1971, but has levelled off and declined since that time. The 25 to 44 year old group has maintained a constant size and proportion in the population between 1966 and 1971 but has begun to grow again in size and proportion of the population to 1976. Those 45 to 64 years of age have maintained a relatively stable sized group in the population over the time period, with some decline between 1971 and 1976. The group who are 65 years of age or older, once constant, is now growing again as a proportion of the population.[29]

---

28. For a more thorough discussion of the nature and implications of Vancouver's population change, see: Quarterly Review, City of Vancouver Planning Department, Vol. 5, No. 2, April, 1978, "Vancouver's Changing Age Composition", P. Mondor, pp. 15-18.

    As Vancouver is Vancouver Community College's designated College Region and the College's primary catchment area, it was thought most appropriate to review the demographic trends within the City. Given sufficient time, a similar analysis could be undertaken for those municipalities in the Region which constitute Vancouver Community College's secondary catchment area.

    Further, as the focus of this Report section is demographic trends in relation to education, those factors which themselves induce variations in demography have not been probed. A more comprehensive discussion of demographic trends would include such key factors as housing, economic structure, and immigration/migration, which result in the spatial, age group, and size differentiation among populations resident in individual municipalities within the Greater Vancouver Region.

29. Statistics Canada projections show a 2.5% per annum growth rate for those aged 65 and over between 1971 and 1991 in Canada; the highest growth rate of any of the age groups in the population.

TABLE 10. POPULATION CHANGE BY AGE GROUP FOR VANCOUVER EXCLUDING THE UNIVERSITY ENDOWMENT LANDS, 1961 TO 1976

Age Group	1961 Population		1966 Population		1961 to 1966 Change		1971 Population		1966 to 1971 Change		1976 Population		1971 to 1976 Change	
	Actual	%	Actual	%	Actual	%	Actual	%	Actual	%	Actual	%	Actual	%
0- 4	31,715	8.25	30,202	7.36	- 1,513	- 4.77	24,425	5.74	- 5,777	-19.13	18,815	4.59	- 5,610	-22.97
5-14	58,154	15.12	60,755	14.79	+ 2,601	+ 4.47	58,780	13.79	- 1,975	- 3.25	48,345	11.78	-10,435	-17.75
15-24	48,450	12.60	64,982	15.83	+16,532	+34.12	77,800	18.25	+12,818	+19.72	74,985	18.28	- 2,815	- 3.62
25-44	103,794	26.99	103,290	25.13	- 504	- .49	107,310	25.17	+ 4,020	+ 3.89	112,985	27.54	+ 5,585	+ 5.21
45-64	89,167	23.19	95,905	23.36	+ 6,738	+ 7.56	100,415	23.56	+ 4,510	+ 4.70	95,600	23.30	- 4,815	- 4.80
65 Plus	53,242	13.85	55,541	13.53	+ 2,299	+ 4.32	57,525	13.49	+ 1,984	+ 3.57	59,550	14.51	+ 2,025	+ 3.52
Total	384,522	100.00	410,675	100.00	+26,153	+ 6.80	426,255	100.00	+15,580	+ 3.79	410,190	100.00	-16,065	- 3.77

Source: Statistics Canada, Census, 1961-76

Another interesting aspect of the population change in Vancouver is the absolute decline in the total population living in the City between 1971 and 1976, so that in 1976 the City reverted to a somewhat smaller size than that attained in 1966. The combined population loss in the 0 to 4 and 5 - 14 year old age groups was equivalent to the net loss for the City as a whole between 1971 and 1976.

In the future, the growth of the 18 to 24 year old age group is expected to slow by the early 1980s and steadily decline in size for another fifteen years. Over the next decade, the most rapidly increasing element of the population will be those aged 25 to 44 years, the most productive component of the labour force. Meanwhile, the 45 to 54 year old age group is expected to decline slightly as a proportion of the population until the late 1980s, when it will experience a surge of growth as the baby boom moves through the cycle. By the mid-1990s, the 55 to 64 year old group will be experiencing the effects associated with the baby boom. Throughout the 1980s and 1990s, the over-64 age group will grow steadily but will not experience a marked percentage growth until the next century.

A variety of social and economic consequences stem from these changes in the age composition of the population: the burden of health care, practices concerning labour force retirement, labour force mobility and productivity, the adequacy of personal incomes (especially retirement incomes), and ... education.

Consistent with the shifts in the age composition of the Vancouver population, the abrupt change in the birth rate in 1960 has already had impact on the elementary school enrolment.

In Vancouver School District No. 39, elementary school enrolment increased throughout the 1950s and 1960s, peaking at 47,230 in 1967, with the steady decline from that date currently

projected to continue.[30] Secondary school enrolment peaked in 1975 at 29,069 students, having been virtually static since 1971. It is expected that secondary school enrolment will also continue to decline in the future, as elementary schools supply fewer children to the secondary level.

Just as the massive decline in the birth rate has depressed the growth rate of demand for elementary education to date, this trend will exert a dampening influence on the demand for post-secondary education.

Traditionally, the 18 to 24 year old age group has accounted for the bulk of enrolment at the post-secondary level. The enrolment which draws from this age group has not yet been affected by the turnaround in the birth rate as the last of the large group of 18 to 24 year olds are still in the post-secondary "pipeline". Over the next two years, the number of 18 to 24 year olds is projected to increase, peaking in 1981 with a strong probability of a sharp decline in their numbers after that date, as the 1960 decline in the birth rate starts to take affect in this age group.

Changes in enrolment brought about by shifts in demographic trends are not likely to have the same impact in all program areas of post-secondary education.

In general, three types of program area may be identified:

1. Those in which enrolment is primarily dependent upon the availability of facilities and resources. Applications invariably far exceed the ability of the institution to cope with the demand, so

---

30. Declining Enrolment: The Issues, Chapter 1, "Past Trends and Enrolments", p.14.

that a decline in demand from the 18 to 24 year old group should not seriously affect enrolment, although applications may be down.

2. Those in which enrolment is primarily dependent on economic conditions and the job market. Similarly, enrolment is linked more directly to factors other than demographic trends.
3. Those general programs where enrolment is primarily determined by student interest. As these programs usually draw the bulk of enrolment from recent secondary school graduates, this area will likely feel the full effects of decline in the 18 to 24 year old age group.

As program areas are highly differentiated in post-secondary education, they tend to draw from a wide age range in the population, so that demographic trends will have a more gradual impact on enrolment than at the elementary or secondary levels. Thus, even in a period of population decline by younger age groups, there could be a steady or even increasing enrolment <u>if</u> program adjustments are made.

For example, a substantial rise in the demand for retraining or leisure-oriented courses on the part of the middle-aged or older population could help to avoid a substantial flattening of the overall post-secondary enrolment growth curves in the early to mid-1980s. However, it must be borne in mind that adults in Continuing Education and skills up-dating courses will be heavily recruited as the effects of demographic change are felt throughout the educational system.

Post-secondary education is a field where demographic trends will herald important policy issues which educational administrators

can expect to face over the next decade. Flexibility with respect to future changes in the delivery and mix of post-secondary programs has already become an important concern and will be more so in the future. At present, we are witnessing a substantial relative decline in the demand for elementary education. Later in the century, we may witness a substantial relative increase in the demand for education among the middle-aged and older population.

Future policy ramifications of population trends arise both from the character of such trends in the years ahead, and from the unfolding effects of past trends. The changing age composition of the population is one aspect of these trends which embodies important policy consequences which have yet to be fully unfolded and explored.[31]

2. Economic Trends

Three basic attributes characterize the economy of British Columbia: a focus on primary resource industries; a dependence on two major export markets, and a concentration of economic activity in the Greater Vancouver Regional District.

a) The Industrial Structure

The economy of British Columbia has been dominated traditionally by its primary products. Currently, the forest and mining industries form the most important industrial

---

31. An up-coming publication co-sponsored by Statistics Canada and the Canadian Teachers' Federation, will lend insight to the relationship between education and Canadian demographic trends. The Class of 2001 will include analysis of historic population trends and four projections of those age groups most relevant to education in each of the provinces. The report will also discuss the general implications of changes in the age composition of the population on enrolment, teachers, educational finance, and students leaving the educational system.

The Class of 2001, Population Estimates and Projections Division, Statistics Canada, 1979.

TABLE 11. EMPLOYMENT BY INDUSTRY FOR BRITISH COLUMBIA/YUKON AND THE GREATER VANCOUVER REGIONAL DISTRICT, 1971

Industrial Sector		British Columbia/Yukon		Greater Vancouver Regional District	
		Actual	%	Actual	%
Primary	Agriculture, Forestry, Fishing and Mining	70,350	8.3	8,177	1.9
Secondary					
	Manufacturing	149,510	17.7	73,935	17.6
	Construction	61,000	7.2	31,135	7.4
	Transportation, Storage and Communications	79,079	9.3	46,274	11.0
	Utilities	9,009	1.1	5,175	1.2
Secondary Total		298,598	35.3	156,519	37.2
* Retail and Wholesale Trade		161,920	19.1	83,169	19.8
Tertiary	Finance, Insurance and Real Estate	44,750	5.3	27,999	6.7
	Community Business, and Personal Services	224,930	26.6	124,580	29.6
	Public Administration	46,000	5.4	20,238	4.8
Tertiary Total		315,680	37.3	172,817	41.1
Total All Sectors		846,548	100.00	420,682	100.0

Notes: * Retail and Wholesale Trade was not separated for British Columbia data in 1971; wholesale trade is normally considered a secondary industry while retail trade is considered a tertiary industry.

Source: Employment and Immigration Canada as quoted in Industrial Development: Views and Issues of the Industrial Community: Phil Paulson, Greater Vancouver Regional District Planning Department, May 1976, pp. 9 and 10.

group. As an indication of British Columbia's focus on primary resources, in 1975 "forestry contributes 44 per cent to the total value-added by all primary and secondary manufacturing industries in the province, and mining and primary metal processing account for another 11 per cent."[32]

Although the dependency of the British Columbia economy on resource industries is evident in terms of the revenue generated by this sector of the economy, this dependency is not evident from the distribution of provincial employment among economic sectors.

Table 11 shows the 1971 census distribution of employment by industry for British Columbia and the Greater Vancouver Regional District. As illustrated, the largest percentage of provincial employment occurred in the tertiary or service sector; about 37% in 1971. Employment in the secondary sector which includes such activities as manufacturing, warehousing and construction accounted for one-third of all employment in British Columbia. The trade sector accounted for 19% of employment, while primary sector employment formed the smallest sector and represented only 8% of provincial employment in 1971.[33]

... For the Future

Again using employment as the indicator of British Columbia's economy, the total employment in the Province is expected to increase by about 44% between 1971 and 1982 according to the forecasts of Employment and

---

32. Climate for Development Western Region, Department of Regional Economic Expansion, Queen's Printer, Ottawa, 1976, p.71.

33. "Trade" is commonly split such that wholesale trade falls within the secondary sector and retail trade within the tertiary sector. However, 1971 data fo. British Columbia has not separated wholesale and retail trade.

Immigration Canada[34] in Table 12. The most significant increases are expected in the tertiary sector, where all components are expected to increase at rates higher than those for provincial employment as a whole. The retail and wholesale trade sector is also expected to experience an increase in employment higher than that of the Province.

Conversely, the primary and secondary sectors are not expected to contribute as substantially to provincial employment growth as the tertiary sector. The manufacturing, transportation, communication, and storage components of the secondary sector are projected to decrease significantly in terms of total employment shares.

It must be emphasized that the projections of employment growth in Table 12 were made in 1975. Recently a variety of institutions and government agencies have been predicting a market slowdown in the growth of employment and a continued swing toward rising unemployment. The Conference Board of Canada recently reported that 1979/1980 would be "... another year of subpotential growth, sustained inflation, and high unemployment ..." in Canada.[35] Thus, while the Employment and Immigration forecasts may be considered optimistic in terms of absolute growth, they do indicate the relative growth between sectors in the economy and should be interpreted in this manner.

Certainly, the labour market indicators in Table 13 suggest that 1975 was a year of change in the provincial economy as British Columbia began a period of long, slow

---

34. Canadian Occupational Forecasting Projections (COFOR), Employment and Immigration Canada, March, 1975.

35. MacLean's, January 8, 1979, "Crystal-balling the Year Ahead", pp. 28 and 29.

TABLE 12. EMPLOYMENT FORECAST BY INDUSTRY FOR BRITISH COLUMBIA/YUKON, 1971 to 1982

Industrial Sector		1971 Employment		1982 Employment		1971 to 1982 Employment Change	
		Actual	%	Actual	%	Actual	%
Primary	Agriculture, Forestry, Fishing and Mining	70,350	8.3	70,807	5.8	+ 457	+ .6
Secondary							
	Manufacturing	149,510	17.7	204,161	16.7	+ 54,651	+36.5
	Construction	61,000	7.2	91,060	7.4	+ 30,060	+49.3
	Transportation, Storage and Communication	79,079	9.3	102,865	8.4	+ 23,786	+30.1
	Utilities	9,009	1.1	13,577	1.1	+ 4,568	+50.7
Secondary Total		298,598	35.3	411,663	33.6	+113,065	+37.9
Retail and Wholesale Trade		161,920	19.1	236,450	19.3	+ 74,530	+46.0
Tertiary	Finance, Insurance, and Real Estate	44,750	5.3	65,500	5.3	+ 20,750	+46.4
	Communications, Business and Personal Services	224,930	26.6	356,653	29.1	+131,723	+58.6
	Public Administration	46,000	5.4	84,702	6.9	+ 38,702	+84.1
Tertiary Total		315,680	37.3	506,855	41.3	+191,175	+60.6
Total All Sectors		846,548	100.0	1,225,775	100.00	+379,227	44.8

Source: Canadian Occupational Forecasting Projections [COFOR], Employment and Immigration Canada, March 1975.

TABLE 13. LABOUR MARKET INDICATORS FOR BRITISH COLUMBIA, 1966 TO 1977

Year	B.C./Yukon Population (000s)	Labour Force (000s)	Employed (000s)	Unemployed (000s)	Employment[1] Rate (%)	Participation[2] Rate (%)	Unemployment[3] Rate (%)
1966	1,263	717	684	33	54.1	56.8	4.6
1967	1,320	759	720	39	54.6	57.5	5.2
1968	1,371	789	742	47	54.1	57.6	6.0
1969	1,425	830	788	42	55.3	58.2	5.1
1970	1,485	871	805	67	54.2	58.7	7.7
1971	1,541	900	835	65	54.1	58.4	7.3
1972	1,600	942	869	74	54.3	58.9	7.8
1973	1,666	995	928	67	55.7	59.7	6.7
1974	1,738	1,052	986	65	56.8	60.5	6.2
1975	1,800	1,103	1,009	94	56.1	61.3	8.5
1976	1,845	1,135	1,038	98	56.2	61.5	8.6
1977	1,883	1,163	1,065	99	56.6	61.8	8.5

Notes: [1]Employment Rate - % of the working age population employed.

[2]Participation Rate - % of the working age population employed or seeking employment.

[3]Unemployment Rate - % of the labour force unemployed.

Source: Labour Force Survey, Statistics Canada as quoted in Manpower Review, Department of Employment and Immigration Canada, Vol. II, No. 1, March 1978, p.5.

growth from the 1975 recession. In that year, growth of the labour force exceeded the number of new jobs available by a wide margin.[36] From 1974 to 1975, the level of unemployment increased by almost 45%, continuing to rise through 1976 and 1977.

In 1977, (the latest year for which data is available) industrial output in the provincial economy did not change fast enough to generate the large employment increases necessary to offset labour force growth, so that the unemployment rate rose again. As there was a below average growth in the labour force, the level of increase in unemployment was not as high as anticipated. However, unemployment rolls are expected to remain high beyond 1977 as the labour force grows at a faster rate than job creation.

One fact which has been influencing the unemployment rate is the steady increase in the labour force participation rate since 1966.[37] In fact, while the working age population in the Province has grown less quickly in recent years, unemployment rates continue to increase because of increasing degrees of participation. Most significant has been the increase in the female participation rate from 34.6% in 1966 to 45.9% in 1977, as more married women enter the labour force and single women remain in it for longer periods of time.

Another source of forecasts in the economic sector are those undertaken through the Forward Occupational Imbalances Listing [FOIL] prepared by Employment and Immigration Canada. These forecasts provide information

---

36. The "labour force" may be defined as persons of working age who are presently employed or are actively seeking work.

37. The "participation rate" may be defined as the percentage of working aged persons in the labour force.

TABLE 14. OCCUPATIONS IN DEMAND IN BRITISH COLUMBIA/YUKON, FEBRUARY, 1978

Financial Management Occupations
Management Trainees, Finance
Comptrollers
Accountants, Auditors & other Financial Officers
Electrical Engineers
Electrical Draughtsmen
Heating and Ventilation Draughtsmen
Systems Analysts, Computer Programmers
Systems Analysts, Business
Programmers, Business
Dentists
Psychiatric Nurses
Therapists
Speech Therapists
Occupational Therapists
Physiotherapists
Dental Hygienists
Dental Assistants
Stenographers, Legal
Technical Salesmen
Commercial Travellers
Sales Persons, Parts
Insurance Salesmen
Real Estate Salesmen
Specialists Cooks
Cooks, Specialty Foods
Barbers/Hairdressers
Cosmetologists
Maids, Domestic
Dry Cleaning Occupations
Pressing Occupations
Dairy Workers, Farm
Timber Cutting Occupations
Fallers
Log Hoisting Occupations
Mining Machine Operators
Fire Bosses
Shake Sawyers
Tool-and-Die Making
Machinists
Welder-Fitters
Welders
Structural-Metal Fabricators
Boilermakers, Erection and Repair
Electricians, Maintenance
Electrical Repairmen
Radio and Television Repairmen
Motor Vehicle Mechanics
Body Repairmen
Helicopter Mechanics
Millwrights
Construction Equipment Mechanics
Diesel Mechanics
Business & Commercial Machine Mechanics & Repairmen
Precision Instrument Repairers
Power Linemen
Electricians
Carpenters, Maintenance
Bricklayers
Tile Setters
Boiler and Pipe Insulators
Pipe Fitters, Maintenance

on the "manpower requirements" in the Province over the short-term (a two year period). Table 14 lists the occupations in demand in British Columbia based on the latest FOIL data revised February, 1978.[38] It should be noted that these occupations often require specific or extensive experience and may be located in remote areas of the Province.

b) The Industrial Markets

The British Columbia economy, particularly in the forest and mining sectors, is highly dependent on the export of its products.[39] In turn, the economic climate of the Province is vulnerable to changes in the world economy, particularly those changes which occur in the United States and Japan. To indicate the importance of foreign trade, it has been suggested that British Columbia's "economy is probably tied more closely to levels of activity in the United States' economy than it is to economic aggregates in Canada."[40]

The extensive provincial forest resource is converted into lumber, plywood, pulp, newsprint, paper and paper products for sale in world markets. The United States is the major importer, accounting for over 61% of forest-related production in 1974, followed by Japan taking 10%, the European Economic Community [excluding the United Kingdom] taking 9%, and the United Kingdom taking 9%.[41] On average less than 10% of forest industry

---

38. FOIL projections are usually listed in the Manpower Review published semi-annually by Employment and Immigration Canada.

39. British Columbia Summary of Economic Activity 1975, Volume XXVII, Department of Economic Development, Victoria, 1976, p.46 "Table of Exports Through British Columbia Customs Ports by Market Area".

40. British Columbia Economic Activity: 1976 Review and Outlook, Volume XXVIII, Ministry of Economic Development, Victoria, 1976, p.3.

41. The Manual of Resources, Department of Economic Development, Victoria, 1974, p.21.

products are sold in local or Canadian markets.

As in the forest industry, mineral production in British Columbia is dependent on world markets for continued viability. Virtually all coal production is under long term contract for sale in Japan, which also imports 97% of provincial production of copper concentrates.[42] The United States presently imports more than half of the crude oil and natural gas produced in British Columbia.

A similar situation affects manufactured goods as "60% of the goods produced in British Columbia are sold abroad"; of this export total, "approximately 50% of the exported goods [are] sold in the United States, with Japan absorbing another 25%."[43]

In the latter half of 1974, the favourable climate for British Columbia's resource industries was undermined by a recession outside the Province. "World-wide inflationary trends, balance of payments difficulties brought about by high energy costs, and continued pressures on the international monetary system" combined to slow down the economies of British Columbia's major trading partners, which in turn, adversely affected production in provincial industries.[44]

This decline had direct impact on provincial employment. Unemployment rates in 1975 showed a marked variation by industry with primary and secondary resource-related

---

42. The Manual of Resources, Department of Economic Development, Victoria, 1974, pp. 24 and 25.

43. Canada-British Columbia Subsidiary Agreement Industrial Development, Schedule "A", 1977, p.3.

44. Summary of Economic Activity in British Columbia 1974, Volume XXVI, p.4.

sectors exhibiting the highest rates ranging from a high of 12.5% in the "other primary" [all non-agricultural primary employment] to 11.1% in "agriculture".[45] Unemployment rates in the tertiary sector, on the other hand, were less markedly affected, ranging from a high of 6.7% in "trade" to 3.5% in "finance, insurance, and real estate."[46]

Further, unemployment rates showed a marked spatial pattern reflecting industry variations by regions in British Columbia. The Greater Vancouver Region had lower rates than the provincial average of unemployment, reflecting the Region's lower dependency on export-oriented primary industries.

... For the Future

The dependency of the British Columbia economy on the export market is not expected to decrease over the next few years. Given the nature of the Province's industrial base, the tendency to sell natural resources rather than value-added goods, and the small size of the Canadian market, the export dependency is locked into the provincial economic structure.

What is at question for the future is the viability of British Columbia's goods in world markets. Over the last two years provincial exports have become more readily saleable abroad primarily owing to the devaluation of the Canadian dollar and the effect of Anti-Inflation Board wage controls.

In 1978, the dollar started the year valued at 91.3 cents U.S.; it closed the year at 84.3 cents U.S. and is expected

45. British Columbia Economic Activity: 1976 Review and Outlook Volume XXVIII, p.27..

46. Ibid, p.27.

sectors exhibiting the highest rates ranging from a high of 12.5% in the "other primary" [all non-agricultural primary employment] to 11.1% in "agriculture".[45] Unemployment rates in the tertiary sector, on the other hand, were less markedly affected, ranging from a high of 6.7% in "trade" to 3.5% in "finance, insurance, and real estate."[46]

Further, unemployment rates showed a marked spatial pattern reflecting industry variations by regions in British Columbia. The Greater Vancouver Region had lower rates than the provincial average of unemployment, reflecting the Region's lower dependency on export-oriented primary industries.

... For the Future

The dependency of the British Columbia economy on the export market is not expected to decrease over the next few years. Given the nature of the Province's industrial base, the tendency to sell natural resources rather than value-added goods, and the small size of the Canadian market, the export dependency is locked into the provincial economic structure.

What is at question for the future is the viability of British Columbia's goods in world markets. Over the last two years provincial exports have become more readily saleable abroad primarily owing to the devaluation of the Canadian dollar and the effect of Anti-Inflation Board wage controls.

In 1978, the dollar started the year valued at 91.3 cents U.S.; it closed the year at 84.3 cents U.S., and is expected

45. British Columbia Economic Activity: 1976 Review and Outlook, Volume XXVIII, p.27.

46. British Columbia Economic Activity: 1976 Review and Outlook, Volume XXVIII, p.27.

to stabilize in 1979 at around 85 to 87 centsU.S. In the important United States' market, devaluation will continue to help sell British Columbia exports, although an anticipated slow down in the growth of the United States' economy in 1979 may lead this country toward more protectionist policies.

Canada is also starting 1979 in its first "controls-free" year since 1975. With wages-in-hand coming out of controls, there is some optimism that export opportunities will continue to be buoyant. Unfortunately, as wage increases are still running behind the rate of inflation, pressure could build for marked increases in contract wage settlements over the next one or two years. This would again dampen the export viability of provincial export goods on world markets.

Levels of activity in the provincial economy are influenced by demand conditions in world markets for the major resource products, minerals, and forest products. When the levels of production in these industries are high owing to buoyant demand conditions, employment, incomes, and spending in other sectors also tends to benefit. As the major resource sectors sell mainly to export markets they, and therefore the rest of the British Columbia economy, are tied closely to foreign economic conditions.

c) Economic Activity in the Greater Vancouver Regional District

The economy of the Greater Vancouver Region is pre-eminent within that of the Province as a whole. Although the Region accounts for less than 0.2% of the provincial land mass, it contained approximately 45% of the provincial population and about 50% of employment in British Columbia in 1976.

The economic base of the Greater Vancouver Regional District includes primary resources and their related processing industries, distribution and wholesaling activities, transportation industries, corporate headquarters, and all types of commercial and service functions. Again referring to Table II, it can be seen that out of a total regional employment base of 420,000 jobs in 1971, only 8,200 of these were in the primary sector. Over 40% of regional employment occurs in the secondary activities, most notably the manufacturing and transportation components. The largest employment group was the tertiary sector. The components in this sector which had the largest Regional employment were community, business, and personal services.

In comparison with the Province, the Greater Vancouver Regional District plays a particularly strong role in certain sectors of the economy. Table II shows that a greater proportion of people within the Region are employed in the tertiary and a smaller proportion in the primary sectors than in British Columbia as a whole. While the secondary sector employs a similar percentage of people in both the Region and the Province, there are differences within the various components of this sector. Employment in the transportation, communication, and storage components, for instance, is significantly higher in the Greater Vancouver Regional District than British Columbia, reflecting the Region's transhipment roles.

... For the Future

Employment in the Greater Vancouver Regional District was forecast in 1973 for thirty-three employment sectors. No more recent employment forecast by sectors is available. This forecast is now generally considered to be

optimistic.[47] However, in 1978 a forecast was made of total Regional employment and labour force as illustrated in Table 15. As can be seen, the 1973 forecast is considerably higher than that made in 1978. It is considered that the 1973 forecast still has merit in the sense that employment trends within the industrial sectors generally reflect the direction in which the Regional economy will move. Thus the remainder of this Report section relies on data trends from the 1973 forecast report.

The proliferation of service-related functions associated with the urban centre of the Province will boost employment in the Region's tertiary sector such that most new jobs created will be in this sector. Service activities are projected to become even more dominant in the future as the spatial nature of international business and the high amenity of the Region combine to attract growth in management, finance, consulting, and other professional occupations. Associated with this growth will be increased clerical and service job opportunities, although these may require higher skills than at present owing to continued improvements in information processing. It is unlikely that the ratio of professional to support staff will continue to be as high as it is at present.

It is anticipated that the primary and secondary sectors of the economy, although vital to the overall well being of the Region, will not be major employment generators in the future. The Regional primary sector is likely to incur both an absolute and relative employment decline. Resource employment is expected to virtually disappear by 1986 as the Regional economy moves towards more urban-oriented activities.

---

47. The Metropolitan Vancouver Economy: A Background Report for the Livable Region 1976/1987, D. E. Baxter and H. O. Davis, June, 1976. An up-date of economic trends in the Greater Vancouver Regional District is presently being prepared by the Planning Department as part of the "State of the Region" Report series.

TABLE 15. LABOUR FORCE EMPLOYMENT IN THE GREATER VANCOUVER REGIONAL DISTRICT, 1971 TO 1986

	1971	1976	1981	1986
Labour Force	464,319	518,115	594,943	629,397
[1]1978 Employment Forecast:				
Low	420,485	*522,000	583,000	626,300
High	420,485	*522,000	600,200	662,400
[2]1973 Employment Forecast:	420,485	522,000	605,000	669,000

Source: [1]Population, Household, Employment and Labour Force Estimates, 1976 to 1991, Technical Memoranda No. 14, Greater Vancouver Regional District Planning Department, September, 1978, p.7.

[2]The Metropolitan Vancouver Economy: A Background Report for the Livable Region 1976/1986, D.E. Baxter and H.C. Davis, June, 1976.

Notes: *1976 Employment figures are estimates. The 1976 figures had not been released by Statistics Canada at the time the forecast was prepared.

Employment in the secondary sector is expected to increase more slowly than the Regional rate of growth. While employment is likely to grow absolutely in all components of this sector, the relative role of each component in the Regional employment structure is projected to decrease. New jobs in this sector will generally be in the transportation, communications, and utility components as opposed to manufacturing. As well, the construction of the Canada/Alaska pipeline may temporarily affect the Regional economy such that unemployment will be lower than the national average. Retail growth is expected to stabilize in the central municipalities of the Region, although new retail activity will occur in suburban centres as the resident populations continue to increase.

Table 16 lists the occupations expected to be in demand over the next two years according to the latest FOIL data revised February, 1978, by Employment and Immigration Canada.

TABLE 16. *OCCUPATIONS IN DEMAND IN THE METROPOLITAN VANCOUVER AREA, FEBRUARY, 1978

Description

Accountants, Auditors and Other Financial Officers

Systems Analysts, Programmers and Related Occupations

Nurses, Graduate, except Supervisors
Physiotherapists, Occupational and other Therapists
Dental Hygienists

Ski Instructors

Secretaries and Stenographers
Typists and Clerk-Typists

Commercial Travellers
Insurance Salesmen and Agents
Real Estate Salesmen
Telephone Solicitors

Specialist Chefs
Cooks, Specialty Foods
Short-Order Cooks
Waiters, Hostesses and Stewards, Food and Beverage
Managing Supervisors, Building
Cosmetologists
Babysitters
Maids, Domestic
Dry Cleaning Occupations
Pressing Occupations

Dairy Workers, Farm
Nursery Workers
Fallers and Buckers
Log Hoisting, Sorting, Moving

Tool-and-Die Makers
Aircraft Mechanics and Repairmen
Millwrights
Construction-Equipment Mechanics
Diesel Mechanics

Source: Manpower Review, Vol. II, No. 1. Employment & Immigration Canada, March, 1978, p.19.

Note: *The Metropolitan Vancouver Area refers to the Greater Vancouver, Sunshine Coast, and Powell River Regional Districts and the municipalities of Maple Ridge and Langley as defined by Employment & Immigration Canada for operations purposes.

E. INTERNAL DATA SOURCES[48]

A number of College records and reports have been reviewed, as have various "one off" staff reports. In general, the recording and reporting system presently in place at Vancouver Community College generates two main types of information reports. These are:

1. Information reports submitted by Vancouver Community College to the Ministry of Education, including:
   - B.C. Provincial Government Statistical Report Forms (October 31st Statistics)
   - B.C. Ministry of Education Monthly Vocational Statistical Report Forms (Form TV27, Full-time Vocational Students)
   - B.C. Ministry of Education Monthly Vocational Statistical Report Forms (Form TV27A, Part-time Vocational Students)
   - B.C. Ministry of Education Monthly English Language Training Report Forms (Form CE 210 and CE 212)
   - Continuing Education Quarterly Report.
2. Information reports available from agencies using Vancouver Community College data, including:
   - B.C. Post-Secondary Statistics Annual Report Enrolment Data, prepared by Educational Data Services, B.C. Ministry of Education
   - B.C. Post-Secondary Education Enrolment Forecasting Committee Report Series. The three most relevant reports are:

---

48. External data sources utilized are documented in the body of the Report.

i) Projections of Post-Secondary Enrolment for British Columbia

ii) Trend Analysis Enrolments for British Columbia, Participation Percentages in British Columbia

iii) Historical Comparisons of the Actual and Projected Fall Enrolments.

In addition to the above, there are a number of "one off" staff reports which have relevant analysis on a topic basis. These include:

- "Transportation '75: Transportation Patterns - Students", Office of Institutional Planning and Development, December, 1975.
- "Distribution of Students by Postal Codes of Term Addresses", J. Goard, October, 1977 and October, 1978.
- "King Edward Campus Survey", J. Goard, October, 1977.
- "The King Edward Story", undated.
- "Five-Year Budget Forecasts", August, 1978.

After a preliminary review of the reports listed above, and discussion with Vancouver Community College staff members, it has become clear that there are a number of problems related to data synthesis and manipulation for the purposes of the Market Research Task Force.

A few initial comments concerning the limitations of the data contained in these reports may be appropriate.

Limitation I: Time Series

As stated by the Ministry of Education, "Student enrolment data for years prior to 1975/76 are taken from forms which were largely unchecked and unedited ... there are probably

errors or inconsistencies in the way these forms were completed as the various sources do not always agree with each other".

This means that Vancouver Community College enrolment data can be used for only three years, 1975, 1976, and 1977.

Limitation 2: 'Snapshot' Information

The principal annual reporting date is October 31st, thus, the data does not represent a cumulative total on a yearly basis.

To ascertain annual enrolment volumes and other cumulative yearly data, a manual sorting of monthly reports would be required. This would also be necessary to avoid double counting of the individual registrants.

Limitation 3: Reporting of Data

Information on the Vancouver Community College student is recorded for the Ministry of Education on six unique forms, each with its own particular reporting format, time, and set of information. Some of these records give considerable detail on the individual Vancouver Community College student, while others give only a basic head count by part or full-time status, and program.

This means that a consistent analysis of data from 1975 to 1977, by certain key student characteristics is impossible. 1976 is the single year for which a complete record of the Vancouver Community College student, by program, full or part-time status, age, and sex, is available. This information, as reported by the Ministry of Education, shows a head count of 2,578 fewer students than is shown in Vancouver Community College records for 1976.

Limitation 4: Disagreement among Reports

There are a number of inconsistencies found when comparing the data contained in Vancouver Community College reports, Ministry of Education statistics, and reports from the B.C. Post-Secondary Enrolment Forecasting Committee. These are:

- inconsistency in enrolment totals.
- inconsistency in enrolments by program and full or part-time status.
- inconsistency of reporting for different years (i.e. classification of students between years).

This means that a set of data from one source must be used consistently throughout a Task Force Report, with acknowledgment of known weaknesses. We used the Vancouver Community College statistics.

The following Table will perhaps illustrate some of the limitations found in the data. It is a summary table only, more detailed tables have been compiled and are available for review. Theoretically, all data came from the same primary source.

TABLE 17. VANCOUVER COMMUNITY COLLEGE: REGISTRANTS (HEADCOUNT) BY PROGRAM FOR OCTOBER

AS REPORTED		ACADEMIC			CAREER/TECHNICAL			COLLEGE PREPARATORY			VOCATIONAL			ENGLISH LANG. TRAINING			GENERAL INTEREST			TOTALS		
	YEAR	Full Time	Part Time	Total	Full Time	Part Time	Total	Full Time	Part Time	Total	Full Time	Part Time	Total	Full Time	Part Time	Total	Full Time	Part Time	Total	Full Time	Part Time	Total
V.C.C. Statistics (withdrawals not incl.)	1975	2127	1662	3789	904	2033	2937	282	995	1277	1804	2513	4317	220	3883	4103	-	1891	1891	5337	12977	18314
	1976	1855	1657	3512	978	2117	3095	275	1038	1313	2128	2575	4703	290	2175	2465	-	2141	2141	5526	11703	17229
	1977	1752	1812	3564	983	1650	2633	230	829	1059	2318	3129	5447	325	2596	2921	-	2425	2425	5608	12441	18049
B.C. Post-Secondary Statistics p.367 Min. of Ed.	1975	2127	1662	3789	904	247[4]	1151	239	950	1189	2691	4022	6713[1]							5961	6881	12842
	1976	1855	1657	3512	973	318[4]	1291	212	1006	1218	2435	4054	6489[2]							5475	7035	12510
	1977	1752	1812	3564	985	359[4]	1344	230	829	1059	2709	5321	8030[3]							5676	8321	13997
B.C. Post-Secondary Forecasting Committee Report #23 p. 75 & 78	1975	2127	1662	3789	904	247	1151[5]	239	4831[6]	5070	2691[7]									5961	6740	12701
	1976	1855	1657	3512	973	318	1291[5]	212	3181[6]	3393	2878[7]									5918	5156	11074
	1977	-	-	-	-	-	-	-	-	-	-									-	-	-

Notes:

1. V.V.I. + V.S.A. + Langara + K.E.C.
2. C.E.S. + V.V.I. + V.S.A. + Langara + K.E.C.
3. C.E.S. + V.V.I. + V.S.A. + Langara + K.E.C.
4. Does not include part-time C.E.S. technical enrollments
5. Includes Music Program
6. Includes E.L.T. Free payers at K.E.C. (we report these as part-time E.L.T. students)
7. Includes V.V.I., Langara, K.E.C., V.S.A., and Manpower Supported E.L.T.

F. SUMMARY COMMENT

As presented by the College Principal in A Planning Process for Vancouver Community College, the task assigned to the Market Research Task Force was threefold:

> "(1) To determine [the] nature of [the] student body currently served by the College ...;
> (2) To estimate shifts in characteristics of student population as described in (1) over the next five years;
> (3) to identify [the] potential student market in broad categories over the next five years."[48]

The work contained in the Task Force Report contributes substantially to an understanding of who in the population is served by Vancouver Community College; both historically since 1976 and at the present point in time through the comprehensive data base provided by the Student Survey, 1978. The compilation of this information has enabled the Task Force to view College enrolment as a continium in which the composition and size of the student body is not considered static, but shifts or trends through time.

Once an understanding of these trends was gained, the Task Force had to decide how best to synthesize and analyze information on the student body in order to anticipate its composition and size over the next five years. Essentially, the Task Force was faced with choosing between three approaches: the one selected for use was "trend analysis", using the participation rate

---

48. Manera, A. S., A Planning Process for Vancouver Community College, May, 1978, p.6.

statistic, which was considered most appropriate to meet the Task Force's mandate.[49]

Trend analysis relies on a base time period in the past from which to project into the future through the extrapolation of enrolment ratios ... the participation rates. Once derived, the participation rates were applied to cohort age groups of population projections for the primary and secondary catchment areas of the College.

---

49. The three approaches are trend analysis, the "policy alternative" approach, and the "futurist" approach.

    The policy alternative approach is distinguished by a set of projections, each of which is the result of a different combination of assumptions relating to decisions made either by an institution or by some external constituency of the institution. Although it is possible through simple manipulation to provide a range of different projections, the policy alternative approach goes one step further by relating different policy decisions directly to ensuing enrolment projections.

    The difficulty encountered in using this approach in the Task Force exercise is the length of time required to generate projections and the necessity to have a complete and thorough intimacy with institutional policy so that the linkage between policy alternatives and the resulting enrolment figures can be ascertained.

    The futurist approach is only beginning to develop and as yet has not produced the characteristically tangible, numeric results associated with the other two techniques. This approach depicts the future through construction of scenarios which are descriptions of the future states of interdependent factors which influence society. These are used to illustrate the effects of many inter-connected alternatives and decisions and their impact upon the long-term future of education.

    The difficulty encountered in using this approach is that it requires estimates of the future states of various key factors whose prediction with an acceptable degree of confidence is indeed difficult. As well, this technique is primarily limited to the long-range horizon so that linkage to the near-term future is not easily demonstrated. Moreover, potential insights are lost, that would be gained from projecting alternative futures back to current situations and decisions.

Trend analysis best serves for short-term planning purposes such as the five year period required by the College. The approach produces a large number of specific output categories which define the potential student market in the broad program categories called for in the mandate of the Task Force.

One important advantage of the approach taken by the Task Force is that it incorporates those changes in the demographic composition and spatial distribution of the population from which College enrolment will be drawn in the future. Thus, the projected enrolment reflects the perceived trends in participation by certain groups such as "older learners" in College programs.

One shortcoming of the trend analysis participation rate approach recognized by the Task Force is that the projections fail to incorporate mechanisms for explaining why enrolment changes. For this reason a detailed discussion of the future demographic and economic trends in the College catchment area has been included in the Report. It is considered by the Task Force that these two areas of general social change will have considerable influence on College enrolment over the next five years.

The composite of the work of the Task Force will certainly assist in a "description of the population whose educational and training needs can best be met by Vancouver Community College in the future ..."[50] This next step involves the assignment of priority in program development, utilizing the data assembled in the Task Force Report as part of the process of derivation of College goals and objectives.

---

50. Manera, A. S., A Planning Process for Vancouver Community College, p.2.

G. RECOMMENDATIONS

The Task Force recognizes that while many of the following recommendations could be implemented in the short-term, others are of long-term order and would require further planning and consideration.

1. It is recommended that a complete and consistent data base on the student population of the College be established and maintained. In order to support planning requirements, it is imperative that a system be established to provide the necessary data. Specifically:

   a) the nature of the College offering requires that comparable data be generated for all programs;
   b) the research aspect of data use should reflect the diversity of programming;
   c) to acknowledge the diversity in duration and type of enrolment within the College, some common measures of participation must be agreed upon;
   d) the limits of comparability among programs and types of student registrants should be specified;
   e) data suitable for monitoring the impact and effect of College policy, practice,and procedure should be generated as part of an increased emphasis on the analysis of system effectiveness and efficiency (i.e. the reality of the practice must be compared to the rhetoric of the Community College system);
   f) the growth of public participation in post-secondary education decision-making should not be overlooked. Therefore, the ease of access to, and dissemination of, College data ... quickly ... throughout both the College and the larger community should be increased.

2. It is recommended that future enrolment projection studies be designed and refined in the light of the experiences of this Report. Specifically:

   a) the definition of data elements in projection studies should continue to be given careful consideration, for they begin to shape our conception of what constitutes participation in post-secondary education;
   b) projection studies must continue to grapple with the evolving re-definition of what constitutes enrolment in post-secondary education, for full-time, continuous enrolment is no longer the only significant pattern of participation;
   c) underlying social factors, such as changing attitudes towards the role of education and fluctuating economic and demographic conditions, must continue to be considered explicitly in projection studies, moving the College in the direction of the "futurist" approach to the analysis of future trends;
   d) institutional policy decisions must be made explicit so that they can be built into projection studies, and conversely, so that projections can be tested and altered when policy decisions are made, moving the College in the direction of the "policy alternative" approach to the analysis of future trends.

3. It is recommended that the College prepare consciously for change. The objective of forecasting is to plan for change so that it is orderly rather than chaotic, accepted rather than threatening, so that the institution shall be prepared for change. Enrolment projections derived in future studies must assist in explaining the different volumes of enrolment, the changing styles of

student participation, and identify the persistence of students through the system (i.e. retention and attrition rates).

4. It is recommended that development work on a College-wide listing/inventory/matrix of offering be continued, based on standardized program definitions and data as part of an improved data collection system.

5. It is recommended that the College take cognizance of the enrolment trends in the composition of its student body. Trends toward increasing number of women students, older students, and part-time students have been noted. The needs of these students, whose numbers are increasing, should be identified and later met through selected modification of program offering, scheduling, facilities, procedures (such as registration), and policies.

6. It is recommended that the current flexibility of the College be maintained by conscious effort in order that the College may accommodate quickly to shifts and fluctuations in the educational needs and demands of the community. To this end, it is vital that no restrictive or cumbersome policies be established which could have the effect of reducing capability to react quickly. Fiscal policies, such as use of contingency funds and a streamlined "Request for Additional Course" process, should reflect our ability to react quickly. Further, owing to the high percentage of part-time students (70%), flexibility in scheduling must be maintained.

7. It is recommended that the College undertake a systematic follow-up of "graduates" as part of an improved system of data collection and feedback. To do so would be beneficial not only as a means of evaluating the effectiveness of College programs, but also as an indicator of future needs and trends of the community as a whole, as the destinations of College graduates change.

8. It is recommended that a common understanding and method of calculation of participation rates be established. The method recommended is detailed in Technical Report, Appendix 3. "Participation Rate" is a respectable surrogate measure, useful in forward planning. There are increasing indications that both the Ministry of Education and other colleges agree.

9. It is recommended that the policies and operating procedures of the College be gathered together and codified. It is further recommended that once codified, policies and procedures be monitored continuously.

Social forces suggest an increased role for planning in post-secondary education. Financial constraints, for instance, are a most pressing issue, since support for post-secondary education is closely related to the economy as a whole. During periods of fairly rapid economic growth and increasing incomes (as the 1960s provided), post-secondary education fared comparatively well. It appears, however, that the tone for the period through the 1980s is being set during the 1970s. Economic growth is likely to be considerably slower, with accompanying lags in income.

Comprehensive planning could also include a review of present and potential educational offerings from the

perspective of such goals as responsiveness, access, diversity, and co-ordination. As well, the derivation and evaluation of alternative educational strategies, and subsequent elimination of those found to be less efficient and less effective, is necessary. Increased emphasis on planning for post-secondary education could also mean that future directions will be more explicitly linked with other aspects of change, such as the forecasting of manpower requirements.

The effect of the foregoing forces, is to require that College policy and procedure be an interlocking web, designed consciously to move the College toward the fulfilment of the College's educational plan.

10. It is recommended that the yet-to-be-established Goals and Objectives of the College include, as part of their establishment, a process for their continuous monitoring. Although considered to be one step removed from the work of the Market Research Task Force, the monitoring of Goals and Objectives, once derived in Phase II of the planning process, arose on several occasions. This question should be given consideration, since the pressure for accountability in education makes such a monitoring process increasingly important.

11. It is recommended that liaison be established and maintained among institutions and colleges, with a view to eliminating and/or avoiding duplication of services. More specifically, liaison among the community colleges within the Greater Vancouver Region would assist in breaking down the artificial "College Region" barriers which are not a true reflection of the actual catchment area pattern of Vancouver Community College. Scarce resources and the possibility of a decline in the

number of students (at least the younger students) will require more co-operation within and among post-secondary institutions. Facilities could and should be shared in order to provide maximum services, while faculty could be shared by institutions in close proximity. Sharing of resources implies, however, a basic recognition of emerging need and considerable uncertainty exists regarding the nature and size of this need.

13. It is recommended that Task Force Function (b) be followed up: ("To describe and account for ... trends in the light of institutional policy and including the financial and physical resources which have been, and are now, available to Vancouver Community College"). This function of the Task Force has been slighted.

14. It is recommended that the College establish a Planning/Research Office or Officer.

15. It is recommended that the raw data produced by the 1978 Student Survey be subjected to analysis. It is further recommended that the Survey be refined and repeated in the future, but only administered to a statistically sound sample.

16. It is recommended that during Phase II of the planning process, a specific time frame be set for the implementation of the approved recommendations of this and other Task Force Reports.

... For Further Study

A number of suggestions have been made by Task Force members; suggestions which would entail more in-depth investigation than has been possible in the present Report. These suggestions include:

a) preparation of a paper on the composition of the catchment area population which the College serves ... a discussion of key components of the population which identify its demographic and socio-economic profile within a spatial context. (A similar format to that used in Vancouver Local Areas, City of Vancouver Planning Department, April, 1975, might be appropriate);

b) assessment of the reasons for the high attrition rates in the Academic programs and suggestions for altering the attrition rate to retain Academic students at the College for longer time periods;

c) a comprehensive inventory of existing College policies and practices which influence the demand for post-secondary education at Vancouver Community College.

UNIVERSITY OF CALIFORNIA
CLEARINGHOUSE FOR
JUNIOR COLLEGES
96 POWELL LIBRARY BUILDING
LOS ANGELES, CALIFORNIA 90024
EE 36

APR 25 1980